



SEQUENCE LISTING

<110> Perera, Ranjan
Rice, Stephen
Eagleton, Clare

<120> Compositions and Methods for the
Modification of Gene Expression

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<150> U.S. No. 10/291,447
<151> 2002-11-08

<150> U.S. No. 60/425,087
<151> 2002-11-08

<150> U.S. No. 10/137,036
<151> 2002-04-30

<150> U.S. No. 09/724,624
<151> 2000-11-28

<150> U.S. No. 09/598,401
<151> 2000-06-20

<150> PCT/NZ00/00018
<151> 2000-02-24

<150> U.S. No. 60/146,591
<151> 1999-07-30

<150> U.S. Patent No. 09/276,599
<151> 1999-03-25

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| aactacatta | cttcctaaat | catacaaaa | ttgtataaaat | atatccactc | aaaggagtct | 180 |
| agaagatcca | cttggacaaa | ttgcccata | ttggaaagat | gttcaccaag | tcaacaagat | 240 |
| ttatcaatgg | aaaaatccat | ctaccaaact | tactttcaag | aaaatccaag | gattatagag | 300 |
| aaaaaaaaatct | atgtattatt | aagtcaaaaa | gaaaacccaa | gtgaacaaat | attgatgtac | 360 |
| aagtttgaga | ggataagaca | ttggaatcgt | ctaaccagga | ggcggaggaa | ttccctagac | 420 |
| agttaaaagt | ggccggaatc | ccggtaaaaa | agattaaaat | ttttttagt | agggagtgt | 480 |
| tgaatcatgt | tttttatgtat | gaaaatagat | tcagcaccat | caaaaacatt | caggacacct | 540 |
| aaaattttga | agtttaacaa | aaataacttg | gatctacaaa | aatccgtatc | ggattttctc | 600 |
| taaatataac | tagaattttc | ataactttca | aagcaactcc | tcccctaacc | gtaaaacttt | 660 |
| tcctacttca | ccgtaat | cattccttaa | gagtagataa | agaaataaaag | taaataaaag | 720 |
| tattcacaaa | ccaacaat | atttctttta | tttacttaaa | aaaacaaaaaa | gtttatttat | 780 |
| tttacttaaa | tggcataatg | acatatcgga | gatccctcg | acgagaatct | tttatctccc | 840 |
| tggtttgc | ttaaaaagta | atttattgtg | gggtccacgc | ggagttggaa | tcctacagac | 900 |
| gchgcttaca | tacgtctcg | gaagcgtgac | ggatgtgcga | ccggatgacc | ctgtataacc | 960 |
| caccgacaca | gccagcgcac | agtatacacg | tgtcatttct | ctattggaaa | atgtcggt | 1020 |
| tatccccgt | ggtacgcaac | caccgatgg | gacaggcgt | ctgttgcgt | gtcgctagc | 1080 |
| gggagaaggg | tctcatccaa | cgtattaaa | tactcgcc | caccgcgtt | cttctcatct | 1140 |
| tttcttgc | gttgtataat | cagtgcgata | ttctcagaga | gttttcatt | caaaggtatg | 1200 |
| gagtttgc | gggcttact | cttaacattt | gttttctt | gtaaattgtt | aatgggtgtt | 1260 |
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| tttcttttgc | atttctgtt | aatatttgc | ttcagg | aactatgg | tgctagg | 1920 |
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| tgaattattt | attcctgaa | gtatctgt | aattagctt | tgatgt | caggtatatt | 2040 |
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| gacaccatt | acaatgt | ggctaa | gatc | caggaca | aggaaattcc | 2640 |
| cagaggt | tcttgc | taagcag | ctg | gaagatgg | gtactctc | 2700 |
| attcagaagg | aatcgacc | tacatcg | ttc | cg | cgattaca | 2760 |
| gtgttatttgc | tggataataa | attcggt | tg | ttgtc | gtt | 2820 |
| aaattgtgtt | tatgtatgt | ttatgtt | ttgtc | ttgtt | cagacc | 2880 |
| tttcttttgc | gtcggtc | atgt | actgg | tgg | ccggcac | 2940 |
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aactacatta cttcctaaat catatcaaaa ttgtataaat atatccactc aaaggagtct    180
agaagatcca cttggacaaa ttgcccatacg ttggaaagat gttcaccaag tcaacaagat   240
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taaaaaatct atgtattatt aagtcaaaaa gaaaacccaa gtgaacaaat attgatgtac    360
aagtttgaga ggataagaca ttggaatcgt ctaaccagga ggcggaggaa ttccctagac   420
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| tttcccacca | accgttacaa | tcctgaatgt | tggaaaaaac | taactacatt | gatataaaaa | 120 |
| aactacatta | cttcctaaat | catacaaaa | ttgtataaaat | atatccactc | aaaggagtct | 180 |
| agaagatcca | cttggacaaa | ttgcccatag | ttggaaagat | gttcaccaag | tcaacaagat | 240 |
| ttatcaatgg | aaaaatccat | ctaccaaact | tacttcaag | aaaatccaag | gattatagag | 300 |
| taaaaaatct | atgtattatt | aagtcaaaaa | gaaaacccaa | gtgaacaaat | attgatgtac | 360 |
| aagtttgaga | ggataagaca | ttggaatcgt | ctaaccagga | ggcgaggaa | ttccctagac | 420 |
| agttaaaagt | ggccggaatc | ccggtaaaaa | agattaaaat | ttttttagt | agggagtgt | 480 |
| tgaatcatgt | tttttatgtat | ggaaatagat | tcagcaccat | caaaaacatt | caggacacct | 540 |
| aaaatttga | agtttaacaa | aaataacttg | gatctacaaa | aatccgtatc | ggattttctc | 600 |
| taaatataac | tagaattttc | ataacttca | aagcaactcc | tcccctaacc | gtaaaacttt | 660 |
| tcctacttca | ccgttaatta | cattccttaa | gagtagataa | agaaataaaag | taaataaaaag | 720 |
| tattcacaaa | ccaacaat | tttctttta | tttacttaaa | aaaacaaaaaa | gtttatttat | 780 |
| tttacttaaa | tggcataatg | acatatcgga | gatccctcga | acgagaatct | tttatctccc | 840 |
| tggtttgc | ttaaaaagta | atttattgtg | gggtccacgc | ggagttggaa | tcctacagac | 900 |
| gcgccttaca | tacgtctcga | gaagcgtgac | ggatgtgcga | ccggatgacc | ctgtataacc | 960 |
| caccgacaca | gccagcgcac | agtatacacg | tgtcatttct | ctattggaaa | atgtcgttgt | 1020 |
| tatccccct | ggtacgcaac | caccgatgg | gacaggtcgt | ctgttgcgt | gtcgctgt | 1080 |
| gggagaaggg | tctcatccaa | cgctattaaa | tactcgccct | caccgcgtt | cttctcatct | 1140 |
| tttcttgc | gttgtataat | cagtgcgata | ttctcagaga | gctttcatt | caaaggtata | 1200 |
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<222> (326)...(333)

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| tttgtccct | gaaaattttg | actaatttcc | aaccaaaaaa | aagtggggga | aaatataaaa | 120 |
| ctctaactaa | taaaacaata | atcaccaaaa | atctatcacc | aaaaatgaaa | aaagattttg | 180 |
| aatacttaggc | catatgagct | acacaaaattt | caaaagtatc | ttacacttat | tacgcacccg | 240 |
| gatgtccca | ctttcgaaaa | acccgttca | agccttcac | gaaagtccaa | cggtcagaaa | 300 |
| attcaaaatg | actgttttag | gcagagccaa | tctaggacca | cgctccattt | atatatggcc | 360 |
| tctgcttctc | tcgaccctta | gagtcctctg | ctctgcgaat | cttggatgtt | gttactgtgt | 420 |
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atagaaaaca ccagcaaagt tactagcagg aaatccaact aggtatcatg aagactacca      180
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cgccctccgc ttcccttcga gtggcccca gtcattcaa ttctccac tgcaggctac      540
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gaaatgaatt gggaaatcga tcgacaatgg cagctcaact caatgatcct caggtataag      180
catttttttgc gcagctctgg tcattgtgtc ttcaactttt agatgagagc aaatcaaatt      240

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| | | | | | | |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-----|
| gactctaata | ccggttatgt | gatgagtgaa | tcatttgctt | ttagtagctt | taatttatgc | 300 |
| ccccatctta | gttgggtata | aaggttcaga | gtgcgaagat | tacatctatt | ttgggttcttg | 360 |
| caggacacag | ggattcatgc | tagcacatc | agcagtgtt | ctacgttggaa | tagtggat | 420 |
| tacttagcta | ctataaaagga | aattttgata | gatatgttg | atatggtgc | tgtacagatc | 480 |
| tatTTAATGT | caatgttattt | gaaactatct | tgtctcataa | ctttcttggaa | gaatacaatg | 540 |
| atgagactgg | gaaccctatc | tggagaata | gagtggagag | ctggaaaggac | a | 591 |
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| aatcaaattt | actctaatac | cagttatgtt | atgagtgaaat | catttgcttt | tagtagcttt | 180 |
| aattttagcc | cccatcttag | ttgggtataa | aggttcagag | tgcgaagatt | acatctattt | 240 |
| tgggtcttgc | aggacacagg | gattcatgct | agacacatca | gcagtgttgc | tacgttggat | 300 |
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| gtacagatct | atTTAATGCC | aatgttattt | aaactatctt | gtctcataaac | tttcttggaa | 420 |
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| ttttctctc | acatctctct | gcctgttcat | gtcgcttgca | agtgaagatt | cgtcgagca | 240 |
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| tccgtccctc | tcctggactt | ccatgcccga | taaggccgc | caactctctc | tcttttctc | 180 |
| tcacatctct | ctgcctgttc | atgtcgccctg | caagtgaaga | tgcgtcgag | caagaaggac | 240 |

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| cctggacttc catgcccata aaggccgaa aactctctct ctctctctct tttctctca | 180 |
| catctctctg cctgttcatg tcgcctgaa gtgaagattc gtccggagcaa gaaggacgaa | 240 |
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| gtatgatctt ggagttgtt gtcgaaattt gcaagctgac gatggccctt cagggaaatt | 180 |
| aaggcgccaa cccagattgc aaagagcaca aagagcacga tccaacctt ccttaacaag | 240 |
| atcatcacca gatcgccag taaggtaat attaatttaa caaatagctc ttgtaccggg | 300 |
| aactccgtat ttctctact tccataaacc cctgattaat ttgggtggaa agcgacagcc | 360 |
| aacccacaaa agtcagatg tcatccacg agagagagag agagagagag agagagagag | 420 |
| agagttttct ctctatattc tggttcacgg gttggagtca atggcatgcg tgacgaatgt | 480 |
| acatatttgtt gtagggtcca atatttgcg ggagggttgg tgaaccgcaa agttcctata | 540 |
| tatcgAACCT ccaccaccaat acctcaattc aatccccacc atttatccgt tttatccct | 600 |
| ctgcttcctt ttgctcgagt ctgcggaaag agagagaaga gaggagagga gagaatgggt | 660 |
| t | 661 |
| | |
| <210> 13 | |
| <211> 336 | |
| <212> DNA | |
| <213> Pinus radiata | |
| | |
| <400> 13 | |
| actagtgatt tgttgagaat gagtaggcatt tgctacaccc atcatcacaa gcatcatcat | 60 |
| gaggagaaga agatccattt ctcactctat tactcgaact tccttcagat taggctgtgt | 120 |
| atttctcaact ctaccactcc aacttccttc aaatgtgtg agttttgtt gtaattgccc | 180 |
| cgtctattta taatcgacgc agcactcgat atataaagac ccgtgtgtgt gaacaacaac | 240 |
| caagtgattt gaattggaaa tgaagagcga gaatggcggt gtcatgaccg ggagcaacca | 300 |
| gcccgcccg tcgaccacgc tgccctata gtaatc | 336 |
| | |
| <210> 14 | |
| <211> 763 | |
| <212> DNA | |
| <213> Pinus radiata | |
| | |
| <400> 14 | |
| actagtgatt tgttgagaat gagtaggcatt tgctacaccc atcatcacaa gcatcaacat | 60 |
| gaagagaaga agacgatcca tttctcaactc tatcaactcca acttccttca gattaggctg | 120 |
| tgtatttctc actctaccac tccaaactacc actccaacctt attgcccggaa aagagagagg | 180 |
| ttcccaaact ctgtcgaaat tctcccactc aaagcattaa agggaaagatc taattgctgc | 240 |
| aaaaaagaga gattcccaat atatttctca actcccttca aatgatttct cactctacca | 300 |

| | |
|--|-----|
| ctccaaactcc cttcaaataatga tttctcaactc taccactcca acttccttca aatgctgtga | 360 |
| gtttttgttg taattggcccc gtcatttat aatcgagca gcactcggtca tataaagacc | 420 |
| cgtgcgtgtg aacaacaatg gcggtgtctt gactgggagc aaccgcataa agaaagtggg | 480 |
| cttcatacat taaaaaaaatc tgtaaatttt acggatttgg aaaaaggaag agcaggaggg | 540 |
| acctcccgac ttgaccggag aatggcggtg tcttgaccgc gtaaagaaaag tggtcttctg | 600 |
| tacccgactt gacccgaaaa aagagggaaac gttgaacgag acaatctctg ggaacttcat | 660 |
| cggaaatgaac ctcacgactt gactcttcg attgtactgt tttcattgtt cccgcgtaaa | 720 |
| acgaccagcc cggggcggtcg accacgcgtg ccctatagta atc | 763 |
| | |
| <210> 15 | |
| <211> 40 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Made in a lab | |
| | |
| <400> 15 | |
| acggataaca gagtcatttat attaaacgaa atggatttgc | 40 |
| | |
| <210> 16 | |
| <211> 51 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Made in a lab | |
| | |
| <400> 16 | |
| tgacgcggcc gcgaccgacg aaaagaaaaa tataacataa gagagtctga a | 51 |
| | |
| <210> 17 | |
| <211> 27 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Made in a lab | |
| | |
| <400> 17 | |
| tatagcggcc gcgggggggg gggggggg | 27 |
| | |
| <210> 18 | |
| <211> 30 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Made in a lab | |
| | |
| <400> 18 | |
| cggagaacaa ggtggagggt agattcttc | 30 |
| | |
| <210> 19 | |
| | |
| <211> 31 | |

| | |
|--|-----|
| aaaacaaacg cctcttgcatt tcctcaaacc ccaaaccgaa tccctcgtaa aggggcaagg | 180 |
| cttttggtcc cgccggccccca cgatcgctc gttcccgctc cgccacgtcg cgtcgcagcg | 240 |
| tgtcgagcaa acagagggggt ccgagcgact ataaaatccc gacgccatcg acaccacagt | 300 |
| ccatcgaaaaa ccttgttcaa ttcccaagtg aaagttagta actgtgaacg aagagttgaa | 360 |
| cttgcattt ctggcgtgtgg attcaagagg aagcagcaaa gtggaaatgg acaactccaa | 420 |
| gatgggcttc aatgcagggc aggccaaggg ccagactcg gagaagagca accagatgat | 480 |
| ggataaggca tccaaacactg ctcataatctgc aagggattcc atgcaagaga ctggtcagca | 540 |
| gatgaaggcc aaagcccagg gtgctgctga tgcagtagaa atgcccaccg ggatgaacaa | 600 |
| atgaagagct caagacatga atgaataaat aattaagctc tggtttatcat ttgctttcc | 660 |
| ggtcgttgtt tgcctgttt ttccctgtca agagcttatt atgagggtcc tttgctctt | 720 |
| tccttagttc ttttggtttcc ttgggtgttc catgaagaga gcaactctct gtgttgaga | 780 |
| gtactcatct cgcttcataaa ggtctcagta tgcgttgcc ttgcgagaat gttatgttct | 840 |
| ctctcataat gctattctga ttttataaaaa aaaaaaaaaa a | 881 |

<210> 23
<211> 350
<212> DNA
<213> Eucalyptus grandis

| | |
|--|-----|
| <400> 23 | |
| ctataaggca cgctggtcg acggcccggtt ctggcccttt cttacaaaaaa gcaaaattct | 60 |
| tataattttt tttgatataa taaaaatgtat ccataaactt ttgcttaatg tgcaacgtaa | 120 |
| accataatattt attcaacgtg atgcttaaac tttatcgag tatcaatgt agtccataat | 180 |
| atattcaata tgatccttca atccaattga agtgcataat gtggtcgcta gatttttta | 240 |
| tgtattcaac ttagtctta agtaccaac cttccataaa tttatgtttt agaaataata | 300 |
| tcgaacatct tttatattat tcaaggaataa aaacgaacat gcatcaaaag | 350 |

<210> 24
<211> 49
<212> DNA
<213> Eucalyptus grandis

| | |
|--|----|
| <400> 24 | |
| actataggcc acgcgtggtc gacggcccggtt gctggtaactt tttttttct | 49 |

<210> 25
<211> 909
<212> DNA
<213> Eucalyptus grandis

| | |
|---|-----|
| <400> 25 | |
| cagggttaag aaaatgaaat atttgcttgg ccccccagct ttgaaagttt ctgttggaaac | 60 |
| acactcacct tgcatttata cgatggttgt gagcagtgcg ggctgggtt gctgcaattt | 120 |
| tatgtatgtcg atgtgatagg cagatgaatg gcagttgagc taagttaaag ccctcataca | 180 |
| tagatcagag caggaggagt agtataatata ggcataatgg caagtcccta aaagagccgc | 240 |
| ttcgtgtattt cccacatatt cctctctcgat tagaacgttc agaaatgggt ggccctttga | 300 |
| ctcttgcattt agagggttgcgtt gtttgcgttcc ctgcagacaa gtttgcgttcc agcgtgagag | 360 |
| actccaccaa actgttccca aagatcttcc cggaccagta caagaatattt gaagtccttgc | 420 |
| aggagatgg gaaggcttcc ggcgcgttcc gccttccat gtatggtggaa gtttgcgttcc | 480 |
| ttgtttaaagt atcaaaggag aagattgtat gtgtggacgc agcagacaat gtcgtgaccc | 540 |
| acagcgttat agacgggtat ctccttgcattt actacaagaa ttcaatggc agcatcaagg | 600 |
| taatttcctaa aggagacgga agcttgggtga aatgggtcgat tgggtttggaa aaggcaagcg | 660 |
| atgaaattcc tgcgttccat gtaatcaagg acttcgttccat ccagaatttc aaagagcttgc | 720 |
| atgagttcat ctccttgcattt tagatggccgc caatcgatccat tccggatgg cactaaatata | 780 |
| caataaaaata atgcggagct ggactccgc cttctatatg catcttagat gagagtcgg | 840 |
| tgctgtcttctt gtttgcgttcc acttgcgttcc gtttgcgttcc agctcttccat tccgcgttcc | 900 |
| aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a | 909 |

<210> 26
 <211> 430
 <212> DNA
 <213> Eucalyptus grandis

<400> 26

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|-----|
| tggagcttga | gatagatcga | ccgagagatc | ccagcgaaaa | tagaagattt | cctgatacca | 60 |
| tcgatccccc | ttctccaaatg | gctgcgaatt | tcgtcattcc | gaccaaaaatg | aaggcttggg | 120 |
| tgtaccgtga | gcacggaaac | gtcggccgacg | tattgggatt | ggacccggaa | ctcaagggtcc | 180 |
| ctgaatttgc | agaaggccaa | gtgctggta | aagttcttgc | cgcagcgctc | aatccagtcg | 240 |
| acgccgcgag | aatgaagggg | gttatcaagc | tcccgggctt | ttctctaccg | gccgtgccag | 300 |
| gttacgatct | cggccggcggt | gtggtaaagg | tggccgcga | agtgaaggag | ctcaagatcg | 360 |
| gggacgaggt | atatggattt | atgtttcacg | ccaagaaaaga | cgggacgctg | gctgagtcg | 420 |
| cagccgtgga | | | | | | 430 |

<210> 27
 <211> 1253
 <212> DNA
 <213> Eucalyptus grandis

<400> 27

| | | | | | | |
|--------------|-------------|-------------|-------------|-------------|-------------|------|
| gcttgagata | gatcgactga | gagatcctag | tggaaataga | agatttcctg | ataccatcga | 60 |
| tccattcttc | tccaaatggct | gcaatttcg | tcattccaaac | caaaaatgaag | gcttgggtgt | 120 |
| accgtgagca | cggagacgtc | gccaaacgtat | tgggatttgg | cccgaaactc | aaggccctg | 180 |
| aatttgcaga | aggccaagtg | ctggtaaagg | ttcttgccgc | ggcgctcaat | ccaatcgaca | 240 |
| ccgcgagagt | gaagggggtt | atcaagctcc | cgggcttttc | tctaccggcc | gtgccagggtt | 300 |
| acgatctcgc | cggcggttgg | gtgaagggtgg | gccgcegaagt | gaaggagctc | aaggtcgggg | 360 |
| acgaggtata | tggattttatg | tttcacgcca | agaaagacgg | gacgctggct | gagtacgcag | 420 |
| ccgttggaaaga | gtcgttcttg | gctttgaagc | ccaagaagct | gcgtttcggg | gaggctgctt | 480 |
| ctctgcccgt | ggtcatttcag | accgcctatg | gaggccttga | aagagctggc | ctctctcatg | 540 |
| gcaagtccct | cctcgtctta | gggtgtctg | gtggcgctgg | cacactcata | atacagctag | 600 |
| ctaaggaagt | ttttggtgca | tcaagagtag | cagctacatc | cagcactggg | aagctagagt | 660 |
| tgttgaagag | cttgggtgct | gatctggca | ttgactacac | caaagtcaac | tttgaagacc | 720 |
| tcccagaaaa | gtttgatgtt | gtctacgata | cagttgggaa | aattgagcgg | gcagcgaagg | 780 |
| ctgtgaagcc | aggagggagc | atcgtgacga | tcgtaaaaca | aaacaagaca | ttaccccccgc | 840 |
| ctgtttctt | tttgcagta | acttcgaacc | gttcgacctt | ggagaagttt | aagcccttct | 900 |
| tggagagcgg | gaaggtgaag | ccggtgatcg | accccaagag | cccgccccca | ttttcgcaag | 960 |
| ccatttgggc | cttctcgat | cttcaaacc | gccggcaac | tggaaaactc | gtgattcacc | 1020 |
| ccgtcccatg | atacacaac | gagaaagaaa | taaagcgtcc | acatggatct | gccttaatca | 1080 |
| cgagtcccta | attagtagtc | gatggtgctt | gctgtttgtc | tccgtacatt | cagttctct | 1140 |
| ttgcataat | gtttctacat | agtgcgtgt | gagaagcaag | tggatgtaca | agtaaaaataa | 1200 |
| ttacttttc | tataaacaat | attacaaact | caaaaaaaaaa | aaaaaaaaaa | aaa | 1253 |

<210> 28
 <211> 99
 <212> DNA
 <213> Eucalyptus grandis

<400> 28

| | | | | | | |
|--------------|------------|------------|------------|------------|------------|----|
| gatagatcga | ccgagagatc | ccagcgaaaa | tagaagattt | cctgatacca | tcgatccatt | 60 |
| cattctccaaat | ggctgcgaat | ttcgtcattc | cgaccaaaa | | | 99 |

<210> 29
 <211> 927
 <212> DNA
 <213> Eucalyptus grandis

<400> 29

| | | | | | | |
|-------------|-------------|--------------|------------|------------|-------------|-----|
| cgacgtcgca | tgctccggc | cgcgcgatgcgg | ccgcggaaat | tcgattacta | tagggcacgc | 60 |
| gtggtcgacg | ccccgggctg | gtactctcac | taattttta | gttttccaat | ttagcccctt | 120 |
| ctgttaattgc | tcatcttctt | taccaaattc | tctaatttgg | ccggcgaagg | gctgacaagg | 180 |
| gattggcat | gtcaccctca | ccaaagggtt | ccgaaggtcc | ggtgacctca | gctgacggcc | 240 |
| acctacacca | aatcttagctc | actagcagcc | taagcccttc | atcaactcta | gtgaaagggtt | 300 |
| ttgagtattt | tttaataaaaa | aatattttaa | aaatatata | cgagagctca | ttacaaaaaa | 360 |
| atttaaaaaa | aaaatctaaa | cattactga | actcaaagt | actttataaa | gagttttac | 420 |
| caaaggatct | tggtttcatc | atttgcacta | cacccaaaac | ccaatttcta | agttaaatca | 480 |
| aaccactgt | ctaata | gaga | taaggtaaat | gttataaacc | aaattccaaa | 540 |
| actaaatata | tttgcgtatc | ttataatcgc | caatttggag | ggtcttattc | tccaaaggat | 600 |
| tgtgacat | at | tagtaattga | tagggtctca | tccgttggac | tccgactcag | 660 |
| tgactggatc | gctgaacggc | gcggaaaccag | aggagcgtga | ttacctaata | tttttccta | 720 |
| ccttggcctt | gagattgaat | ttcagaaaaaa | aaaaaagaaa | aaggaacaac | ttcggccact | 780 |
| gttctataaa | atgcatgcgc | caccccgacc | cccacccacg | catcacatcc | atccagcctc | 840 |
| cacgacagac | gcataaaacac | aacacacgtc | ggttagagag | agagagagag | agagagagag | 900 |
| agagagagag | atgcttggac | agttgtc | | | | 927 |

<210> 30

<211> 411

<212> DNA

<213> Eucalyptus grandis

<400> 30

| | | | | | | | |
|--------|--------|------------|------------|-----------|------------|------------|-----|
| actata | aggggc | acgcgtggtc | gacggcccgg | gctggctga | aactgtcgct | cggcgatgca | 60 |
| taccaa | aggc | tgaagg | tatc | agaatcta | atgc | tttatg | 120 |
| tgac | cccc | gac | tttgc | acttca | cc | ctcagct | 180 |
| ctct | tcacc | ct | aaaaggta | gct | aaaaga | atgagactt | 240 |
| ccacc | agcct | ttt | caca | ca | acatgg | caac | 300 |
| ttgc | acgctc | ttt | cata | ttt | tttgc | atgcgt | 360 |
| cgg | taccac | ccact | ttc | ac | ccat | acatg | 411 |
| | | | | | | | |

<210> 31

<211> 178

<212> DNA

<213> Eucalyptus grandis

<400> 31

| | | | | | | | |
|-------|-------|------|------|-----|-----|----------|-----|
| cgagt | cagca | gaa | accc | agt | ta | cactccgc | 60 |
| cgat | ttt | cact | gag | cct | ctt | gctt | 120 |
| agg | aact | ttt | ttt | tc | tc | tc | 178 |
| ttt | ttt | ttt | ttt | tc | tc | tc | |

<210> 32

<211> 178

<212> DNA

<213> Eucalyptus grandis

<400> 32

| | | | | | | | |
|---------|-----|------|--------|-------|-------|------------|-----|
| gtccaat | gtc | ctgt | caaagg | aggaa | aggat | actatggccc | 60 |
| tggat | ttt | at | ttt | ttt | ttt | ccggc | 120 |
| ttt | ttt | ttt | ttt | ttt | ttt | ccggc | 178 |
| ttt | ttt | ttt | ttt | ttt | ttt | ccggc | |

<210> 33

<211> 178

<212> DNA

<213> Eucalyptus grandis

<400> 33

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| gcatggatt | tagtatgtt | attgagtacc | cgtcgccacc | accttcaagt | aaatcaggag | 60 |
| tcagcagaaa | cccagtacac | tcgccaaacg | gagctaaacc | tcatggccat | acgatttctt | 120 |
| tcactgagcc | tcttgcttt | cctccggaat | ctcacggcac | cggaatgccg | gaggcaac | 178 |

<210> 34

<211> 1274

<212> DNA

<213> Eucalyptus grandis

<400> 34

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|--------------|------|
| ctataggca | cgcgtggcgtc | acggccggg | ctggcccttt | cttacaaaaaa | gcaaaattct | 60 |
| tataatttt | tttgatataa | taaaaatgat | ccataaactt | ttgcttaatg | tgcaacgtaa | 120 |
| accataatat | attcaacgtg | atgcttaaac | tttaatcgag | tatgcaatgt | agtccataat | 180 |
| atattcaata | tgatcctca | attttaattt | aatgtgcaat | gtggtcgcta | gattttttta | 240 |
| tgtattcaac | ttagtctta | agctaccaac | cttccaataa | tttatgttta | gaaataatata | 300 |
| cgaacatctt | ttatattatt | caaggaataa | aacgaacatg | catcaaagt | ttaaatatata | 360 |
| caaataaaat | aaaattttaa | gaattatatt | acatattaaa | attaaagttc | atgattaaat | 420 |
| tgaaataaaaa | taaaaattta | aaaatcacgt | tgtatgttgc | gccgaaacaa | aattcagtga | 480 |
| cttgtggtgt | caattttctt | aggtaggact | ccacaagcat | tgagatggag | tgttccttcc | 540 |
| gccgaggttt | tcattgcgtg | gctcaaaacg | gtggcgcgtt | ttgcacgaca | cgagatgcct | 600 |
| cgattgccgc | atcgtgttagg | cgacgcacg | aaaaaacgcg | ttgccgtggc | gtctatccgg | 660 |
| ggtttcgtct | ccgatgcggc | acgtacgcta | taaatgcgc | cgatctcccg | gtctgccaat | 720 |
| tcgctatcga | ttgcagaaga | aaactcaaac | cctaggcgct | ctctctccgt | tcgacactc | 780 |
| gaagttctcc | tctcttcgcg | tcaagatgca | aatctttgtg | aaaaccctta | ctggcaagac | 840 |
| aatcaccctc | gaggtggaaa | gctcggacac | agtcgataat | gtgaaagcaa | aaatccagga | 900 |
| caaggaaggg | atccctccgg | accagcagag | gcttatcttt | gtggcaagc | agcttggaaaga | 960 |
| tggccgaacc | ttggccgatt | ataacattca | gaaggagtcc | accctccact | tggtgctccg | 1020 |
| tctcagggga | ggcatgcaaa | tttttgcgaa | gactcttact | ggcaagacaa | tcaccctcga | 1080 |
| ggtggaaagc | tccgacacag | ttgataatgt | gaaagaaaaa | atccaggaca | aggaaggat | 1140 |
| ccctccggac | cagcagaggc | ttatcttgc | tggcaagcag | ctggaagatg | gccgaacctt | 1200 |
| ggccgattat | aacattcaga | aggagtccac | cctccacttgc | gtgctccgtc | tcaagggagg | 1260 |
| catgcaaatc | tttg | | | | | 1274 |

<210> 35

<211> 795

<212> DNA

<213> Eucalyptus grandis

<400> 35

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|-----|
| aaaaatacag | gctttcgaaa | gctagtgcgg | tataaataac | ctggggaaaag | caagccgctt | 60 |
| gagcttagt | ttcagtctcgc | catggccact | cacgcagctc | ttgctccctc | aaccctcccc | 120 |
| gccaatgcca | agttctctag | caagagctcc | tctcactcct | tcccactca | atgcttctct | 180 |
| aagaggctcg | aggtggcgga | atttcaggc | cttcgtgctg | gatcgtgtgt | gacttatgcg | 240 |
| aagaatgccg | gggaggggatc | cttcttcgat | gctgtggctg | ctcagctcac | tcccaagact | 300 |
| tcagcaccag | ctccagctaa | gggagagact | gtcgctaaac | tgaaggtggc | aatcaatgg | 360 |
| ttcggtcgca | ttggtcggaa | cttccttaga | tgctggcacf | ggagaaagaaa | ctcgccccctt | 420 |
| gatgtcattt | ttgtcaatga | cagcgggtgg | gtcaaaaatg | cttcacattt | gctgaagtat | 480 |
| gattccatgc | tggggacttt | caaagctgat | gtgaaaattt | tggacaatga | gaccatcagc | 540 |
| gtcgatggga | agcccgttaa | ggtcgtctct | aaccgggacc | ctctcaagct | cccctgggct | 600 |
| gagctcgca | tcgacattgt | cattgaggga | actggagtct | tcgtggatgg | ccctgggtct | 660 |
| ggaaaacata | ttcaagctgg | tgccaaagaaa | gttatcatca | ctgcaccagc | aaaaggcgct | 720 |
| gatataacca | cctacgtcta | tgggtgtaat | gagacagattt | attcgcata | agttgctaac | 780 |
| ataatcagca | atgct | | | | | 795 |

<210> 36

<211> 1200
<212> DNA
<213> Eucalyptus grandis

<400> 36

| | | | | | | |
|-------------|-------------|------------|------------|-------------|-------------|------|
| aaaatatacca | tcgacagcat | caccccgctt | agagaacggt | gtctcggtt | ctcacaatgt | 60 |
| ctatacgccga | atgtacaaaa | tccgcataat | gttctataat | atagcgact | ttacagatga | 120 |
| gcattcaaat | acgtacgccc | tactcgattc | ccattcgatt | gttcattcat | ccgcatgcaa | 180 |
| atttcataga | gataatatct | gtgcacgtcc | ttagattaag | aacaaccaa | gagtatctgg | 240 |
| tggaaatttg | aagcatgacc | accgaagtca | gatggaacaa | acaagggtggg | tgggtgggat | 300 |
| atagtggaca | aaggaacgag | aggtaatag | gaaaaggaga | aggcaagatg | cgggagatag | 360 |
| gatttacgtg | gcgagcggcg | attgcacgca | tggtccaccc | caccctcaac | ctcaaacttt | 420 |
| cgaaaatgca | acgggcatca | gggtggcgat | gaaggagacg | atggagatat | tgttgctttc | 480 |
| tccccccaaa | aaacatcatc | caatccatcc | ccattcctca | tcttcaccac | aaggagtctg | 540 |
| aagctctct | tcaccggtcc | gtcgctttct | ctcttatctt | cttcttctcc | ctccttctct | 600 |
| cgtttctct | tcgaccgttc | tctcggtatc | gtgaatttat | tgcggggatgg | ttcgcacatgt | 660 |
| ataaaattcca | cagcaacgag | ggcccccgtc | cacaatgtcg | acgtctccgg | ttagcagctg | 720 |
| gtgcgccacc | tccttctccc | ctgcccattc | ctcgctcaag | agagccgccc | gcctacggcc | 780 |
| ctctctctcc | gccccctctcg | gcccttcctc | ctcctcctcc | tccgtctctc | ctccgaccct | 840 |
| catccgtaac | gagcccgaaa | tcgcccgtcc | cgccctgtc | atcaacccca | cttggacaga | 900 |
| agagatgggc | aaggactatg | acgaggccat | tgaggctctc | aagaaactcc | tcagtgagaa | 960 |
| gggggacctg | aaagccacag | cagccgcaaa | agtggagcaa | ataactgcgg | agttgcaaaac | 1020 |
| tgcttcccca | gacatcaagc | catccagctc | cgttgacaga | atcaaaaactg | gcttcacctt | 1080 |
| cttcaagaag | gagaaataacg | acaagaaccc | tgctttatat | ggtgaactgg | caaagcagag | 1140 |
| tccaaagttc | atgggttttgc | cttgctcgga | ctcgagagtg | tgcccatctc | atgtgctgga | 1200 |

<210> 37
<211> 648
<212> DNA
<213> Eucalyptus grandis

<400> 37

| | | | | | | |
|-------------|-------------|------------|------------|------------|-------------|-----|
| cgacggactc | ctttcacgat | atcgaaacga | ggaaacggag | gagaagcaga | agaaagaaga | 60 |
| tgaagaaagg | catgggttgc | gtgatggatg | aaactgtcg | gaagctggg | gttcaggga | 120 |
| gttctattta | tggggcgaaa | caggggaggg | gaaaccgaat | ttaccaagat | gcccttcttgc | 180 |
| gtgggattgg | acatggagct | gcacgaccgt | cgtcccatca | cgaagagtct | tgctttcg | 240 |
| tacacatgca | atcgctggcg | aaccgacctt | atccgaccgg | ttccaagctt | gtcctggtaa | 300 |
| aaggtttgcg | accttggaaa | aggcttaaga | gatgtatcg | tgccttaacc | attattccat | 360 |
| gttcacataa | tatttggccc | ggttttcagg | tcaatttgg | agttagccgg | ttcggttcta | 420 |
| gtcccgcctcc | cgattcaaaa | attcattggg | aacaaatttt | gacactgtct | ggtatttttg | 480 |
| gtctaagacc | ctacccaattt | ttagaactgt | acacccttgc | tttatcccaa | aataaaaattg | 540 |
| tcaatttagtc | aacttttac | acttgatgt | cgattaagta | gatggatgac | atggtctttt | 600 |
| accagcccg | gccgtcgacc | acgcgtgccc | tatagtgagt | cgtattac | | 648 |

<210> 38
<211> 288
<212> DNA
<213> Eucalyptus grandis

<400> 38

| | | | | | | |
|-------------|------------|------------|-------------|-------------|------------|-----|
| gattgtataa | cgactcacta | tagggcacgc | gtggtcgacg | gcccggtctg | gtatcgtaa | 60 |
| agaagtccgt | cgacgacaat | ggccgagaag | agcaagggtcc | tgatcatcg | agagaagagc | 120 |
| aaggcctctg | tcatcgagaa | gaagagcaag | gtcctgtatca | tcggagagaaa | gagcagggtc | 180 |
| cattatcatcg | gagaatcgaa | ttcccgccgc | cgccatggcg | gccggggagca | tgcgacgtcg | 240 |
| ggcccaattc | gccctatagt | gagtcttact | acaatttact | ggccgtcg | | 288 |

<210> 39

<211> 382
 <212> DNA
 <213> Eucalyptus grandis

<400> 39
 acagcaatct catctgatga ttcttcagtt cggagctcag aggatacacatc atctatacg 60
 gaatttgagct gtgcaatctt ctcggcaagc accttcctcg ttttctgaaa atcatcgat 120
 ttttaagggtga atccatattt cgagatggc catgttactg ctacactctc ttcacagcat 180
 acatgaagga ggtcacatag caagcataca taggaccta tatacaaata tgacagcaga 240
 ccagccccggg ccgtcgacca cgcgtgcct atagtagtag tggaaagga gtgagaggag 300
 ctcttgcgtga ggaatgtcgg cttttcttcc atcagttgtat gttccgggtt cctagtcatt 360
 atgccatgg tggccactcc ag 382

<210> 40
 <211> 986
 <212> DNA
 <213> Eucalyptus grandis

<400> 40
 aaatacaaac tggtttaata ttcaactcag ataattacat gacaccaccc aaataatgga 60
 aagtcaagca aatagacata ttatccccac acataatcaa ctatattcat gactggagag 120
 gtgctagatg gtatagatc cctagttatt atttattttt ttggggccga gaagatcctg 180
 atggatctat gctgtttgtat actttcagat ttgtttgtc tacagctcaa ataaattagt 240
 gcttgggttt tgatatatta tctaattctga tacaagtctt tgcctggcc aattttgca 300
 gagtttcctg caaaacacgtg cactaaagct tccagaggac ctcatgccat gcccaaggc 360
 accacctatg atggaacgga gaatcaaacc acagactgaa caggcgttga aatgcccag 420
 atgtgattct acaaacacaa aattctgtta ctataacaac tacaatctt cacaacctg 480
 ccatttctgc aagacctgca ggcgatactg gaccaaggaa ggtgccttac gtaacgttcc 540
 tgttgggtgg ggttgcagaa agaataaaacg agccaagcga gcagtagacc atcctgtctc 600
 tgctcagaat gaagcatcca cctctgcagc cccaggcaac gaagtacctg accggctctcc 660
 ctttgagcca ccatcttcaa aatccatttta ctatggggaa gaaaacatgaa acttaaccgg 720
 tctccccctt agcagaattc agcaggaccc agctgcattt gcccactgca actcttcttc 780
 ctttcttagga atgtcatgtg gcacccaatc ggcctctctg gaaccacatc ttccggcttt 840
 aaatacattt aattcattca agtctaacaa tcctggtctg gatttccctt gcttaagcac 900
 agaccagaat tcactgtttg agaccagcca gccacaactg tcaagagcaa tggcatctgc 960
 cctttttct atgccaatgg ctcctg 986

<210> 41
 <211> 313
 <212> DNA
 <213> Pinus radiata

<400> 41
 aaaggaaaat tcaaagatct ttagccaatt tttgttgtg tgaccttggaa tttctaaaaa 60
 atttaatgga ttctgtttctt aaattcctga ttctgtcaag gctgaaggcc acgatagtaa 120
 tagaaaatgg acggcagttt atcctttcat ggctggacac acagaatttgg tggagggact 180
 ctccattctg gtttatccgc cgttagttct ctctgtactc cacccttagt tctctttgt 240
 ctctgagaccc ttaatgatta gccctgctta tgctgtcatt actgaactca cttccagagc 300
 cccaaaaatc tct 313

<210> 42
 <211> 713
 <212> DNA
 <213> Pinus radiata

<400> 42
 taattcacaa gtagaaaatg agattttgc aatttgtaa ctaacatttc ccggctctct 60

| | |
|--|-----|
| ctgtatgttt tcacccctta atgtaattga aatttgcacc cgggttagat tcaaagcga | 120 |
| gaataacatc ggggccttgt tcttagacaga gattttcac aaataacagg ttcgaaggta | 180 |
| tgttagaca tctgggtagt tgtagaataa agacggagcc cattaggtga tccaatcgaa | 240 |
| gagctcagat gggaaaacag ataaaaattt tcgggtggac cttccttcac atgttaatta | 300 |
| tatatcaagt gtcgccaatc cttatgtgaa acatttagta aagcttcgcc agagcacttc | 360 |
| ttataggcat tctgtggct ctgttgggt gggttggaaactcctttaa gggaggtatc | 420 |
| tgaatatttg caacagaagt cagttaaaca agtgggtgac tgtctgtttg tacaagatgt | 480 |
| tactggcata cctgtggct tgatagagac ttccaggcgc attgtgcattg taaatcattt | 540 |
| ggtgatgcag aagctagccg gagtagagtc tatagagccc actgaagcaa ttgggttaat | 600 |
| caagcttcct agcagttct acaacttggaa atctcttggaa attcactcta gttcccagat | 660 |
| atggtgcctg tcgcccacatc gtctgcttgt acttgatggc attcaggatc ctg | 713 |

<210> 43
<211> 28
<212> DNA
<213> Pinus radiata

| | |
|---|----|
| <400> 43 ccacctcaca tcaataaaatt ttatacga | 28 |
|---|----|

<210> 44
<211> 35
<212> DNA
<213> Pinus radiata

| | |
|--|----|
| <400> 44 gctgtttcat tggggtcata gctacgtggt gctga | 35 |
|--|----|

<210> 45
<211> 1729
<212> DNA
<213> Pinus radiata

| | |
|---|------|
| <400> 45 cttattgaca tataaaagca aagttggatc catctgttat tttgggtccc ctccagaagc | 60 |
| cttactaaat gcggcacaaaa aatccacgtt aagaacttct gaatttacgg tcatactggc | 120 |
| tctgttaatta cgaattttagg gttcctctg tcaatatactg gtatgtgacaa acaagggtta | 180 |
| atggcagcct tagcaacaac tgaagttgt gatacatatc cacgccttgt ggagaatgg | 240 |
| gagcttcgtg tcttgcaacc aattttccag atataatggtc gacgtcgagc tttctctgga | 300 |
| cctatagtta cactgaaggt ctttggggac aatgtcctt tgccggaaatt ctttggggag | 360 |
| agaggtaatg gaagagttt ggtatgtat ggaggaggaa gccttagatg tgccatactg | 420 |
| gggggcaatg tagttgtatc tgcccaaaac aatgggttgt ctggaataat tgtcactggc | 480 |
| tgcataaggg acgttgatga aataaacaga tgtgacattt gtataagagc actgacatct | 540 |
| aaccactga aggccaaacaa gaagggtgtt ggtaaaaac atgcgcctat ttacattgt | 600 |
| ggtacccgca ttcttccggg ggaatgggtat tatgtgcata gtatgtgtat tcttggat | 660 |
| cagcaagagt tatcactgtg agataataaa attcataagt ttcatggatgt gacttcatg | 720 |
| tccgtggaa cataatattt actcgagttt gattctaata ggattaattt atagattctg | 780 |
| aaaatttgggg aatatctctg gtcataaaaa tcttcttctc atgtgtatctt ttatgtctag | 840 |
| ctttgagtttccatc aggtatgtttaa gaagttgtt catgttgcata taaaggtttt gcaagtat | 900 |
| tcggaccatc ataagagata gattatggaa ctcaggact tgcttatttt aatccaaat | 960 |
| aacattttt ctttggatgtt ttgccaaatt aacttttattt tccctggca ccactagtga | 1020 |
| tttgcataat ccagttgtt agaacaataga agtggcaac ggttagatgtt gcaacagtat | 1080 |
| ctagcataga tttaacaatgtt attgttggat cattataaga aaataaaacta cagaaccaag | 1140 |
| ggaatctgtt tgacaacata gttaaagtag gcatgggtct actgtatcga tacatcttca | 1200 |
| taaacagaaaa aatatgaaca agctctaattt atgggagaaaa ctccagctt gttttgtat | 1260 |
| taagcatcca tattcacacc taaaaggatca caagttccaa aataaaaattt ccaatgaatt | 1320 |
| tagccatctt aatcagacatc tataagaaat acactaggca tctggggatc aaaatccat | 1380 |

| | |
|---|------|
| agtttagaaa gtagttgtaa ataacccaga gacaaaaatc tcaatgatag cttgcttggg | 1440 |
| tcataggaaa gataataatt gaaaacatag ttgaaaggag aatcctagca atggctagct | 1500 |
| tgaataatag atgtacagca aaattacagt agttgagaac aaagatggaa ggataatccc | 1560 |
| aacgatagct agcttggaca gtaggatgtat tacatcaaaa tcatagcagt tgagaacata | 1620 |
| gttggaaagga gaatccttat gatggctacg ttggataata ggcgtgatta tcgttaggtag | 1680 |
| attagagcac aagatcaaac taatagctgg cgccagctatc gactatttt | 1729 |
| | |
| <210> 46 | |
| <211> 1038 | |
| <212> DNA | |
| <213> Pinus radiata | |
| | |
| <400> 46 | |
| tgattactat agggcacgca tggtcgacgg cccgggctgg taaatgagaa catgataagc | 60 |
| tgttaaatt catgctagtc accataactt ttctcattgc ttttcatcca cactgttgat | 120 |
| tcattcatta tataagatca gattcgatg atatacaggc aaccatagaa acaaccagca | 180 |
| aagttactag cagggaaatcc aacttaggtat catgaagact accaacgcag gctcgataat | 240 |
| gttgggtgtc attatTTTg ggtgctgtt cattgggtc atagctacat cttttgattt | 300 |
| ctattacttc gttcaacagt ggctgggtc atactgcgt actcgttagag gatgctgtta | 360 |
| ccctcgacg ggaaggcctg ctccgaatt ttccattcat ggccctctggc ccaactacaa | 420 |
| gaccggtaaa tggccacagt tctgtggttc ctccgaagaa ttgcactact caaagatctc | 480 |
| agatctggag gaggagctga acaggtattt gggttcgtt agctgtccaa gcagcgatgg | 540 |
| acaggaattt tggggacacg agtgggagaa acatggcact tgctctctca atcttgcgtt | 600 |
| gcattcatac tttgagaagg ctctctcctt gagacaaaat atagacattt ttggggctct | 660 |
| taaaaactgca ggtattaaac ccgatggaag ccaatacagt ttgagcgata tcaaggaagc | 720 |
| cattaaacaa aacactgggc agctcccagg aatcgattgc aacacgagcg cagagggaga | 780 |
| gcatcaacta tatcagggtgt atgtgtgtgt tgataaatcc gatgcttcca ctgttattga | 840 |
| atccccatt tatccacaca gcaattgccc atccatggtt gtgtttcctc cttttggga | 900 |
| ggatcaggag gaccgagatg gttacacaga aggaatgtac gagctgtaga tctggacaaa | 960 |
| cagcatttct tctctccgca tttgattttt atcaatgaaa ttccgatttca caacattttt | 1020 |
| aaaaaaaaaaa aaaaaaaaaaaa | 1038 |
| | |
| <210> 47 | |
| <211> 91 | |
| <212> DNA | |
| <213> Pinus radiata | |
| | |
| <400> 47 | |
| aattttccat tcatgcctct gccaaactac aagaccggta aatggccaca gttctgtgg | 60 |
| tcctccgaag aattcgatat caagcttattc g | 91 |
| | |
| <210> 48 | |
| <211> 91 | |
| <212> DNA | |
| <213> Pinus radiata | |
| | |
| <400> 48 | |
| gctttccat cacactgggtg cctcattcat tatataagat cagattcgat tgatatacag | 60 |
| gcaaccatag aaacaaccgg caaagttact a | 91 |
| | |
| <210> 49 | |
| <211> 809 | |
| <212> DNA | |
| <213> Pinus radiata | |
| | |
| <400> 49 | |
| tgatatatat aacttcttagc agaatgacac gcgacttggta tatctttca ttttttaacc | 60 |

| | | | | | | |
|-------------|-------------|------------|------------|------------|------------|-----|
| catgaaaacc | gattagggtt | ttgcaaatta | ggcattgcc | attcaaataa | ttctcagatg | 120 |
| aaagattctc | tctaacaatt | acaaatgatt | atttttcc | atgagtgtt | catgttcgaa | 180 |
| cggctgccc | agtctgttag | agagcataga | gaaccctccc | tgcccaattt | gttagagcat | 240 |
| agagaaccct | actgcattgag | tagtaagaaa | aatattcggt | ctcaattcgg | caaagaccac | 300 |
| ctcgaatgga | tgacttcaac | gacaatctca | tgatagtgtt | ctgatcagca | ccagttcacc | 360 |
| tatatatattt | atcttagggtt | tagttgcat | gtatcaatcc | tctggtgcac | taggtaattc | 420 |
| tttcccagta | tcatatatcc | ttaatactgt | tttgtcttt | aatccatggc | taccatcaga | 480 |
| acaagctcaa | agcagaataa | gggagcatca | gccatcctct | tgcttatcgc | gattgcaggg | 540 |
| ttagtaaatg | cgtgcaacgc | tgtgggtatt | gagccaatgt | gcgacactgt | ggtgtcgagt | 600 |
| cttctgaggc | ttctgccatg | caggacggct | gttgatccct | caattgccgc | cattccactt | 660 |
| ccaagctgct | gcaacgcgg | tgagtca | gggcttcaat | gcctctgtct | cgtcgtaac | 720 |
| ggccctcctt | ttccaggggt | cgaccgcggc | ctcgcaatgc | agtcgcctgc | caaatgccat | 780 |
| ctcacccttc | ctccctgtaa | cagttagtt | | | | 809 |

<210> 50
<211> 428
<212> DNA
<213> Eucalyptus grandis

| | | | | | | |
|------------|-------------|-------------|------------|-------------|------------|-----|
| <400> 50 | | | | | | |
| tttcttgtga | ctattcattt | tcctcctgat | tatccattca | agcccccgaa | ggttgcattt | 60 |
| aggactaaag | ttttccaccc | aaatataaaat | aacaatggaa | gtatctgcct | tgacatcttg | 120 |
| aaggAACAGT | ggagtcctgc | tttgacaatc | tccaagggtt | tgctctcaat | ttgctctttg | 180 |
| ttgacggatc | caaaccaga | tgatcctctt | gtaccagaga | ttgctcatat | gtacaagact | 240 |
| gataggggca | aatatgagtc | cactgcacgg | agttggactc | agaaatatgc | aatgggttaa | 300 |
| ctttaaaaac | tatataatcag | tgatgaaact | ttatccctaa | tttggaaatct | cttcgaatca | 360 |
| atgacttgtt | tgcttgcata | aaatgtttcc | ttaagataag | tggcttcct | caaacttga | 420 |
| ttgaagtg | | | | | | 428 |

<210> 51
<211> 525
<212> DNA
<213> Pinus radiata

| | | | | | | |
|-------------|------------|-------------|------------|------------|-------------|-----|
| <400> 51 | | | | | | |
| cccttcttg | ccttcaacta | atccctgctca | tcctctcctg | cccccattcc | caaagatggc | 60 |
| tgcacccaga | tcatccgcta | aattgggtgc | acttttggca | atactgctca | tagttgcggc | 120 |
| agcgcaggct | caagattgct | caaatgccat | ggacaattt | gctccatgca | cttcagcagt | 180 |
| gggactgtct | agcaatggag | tgaagccctc | atctgagtgc | tgtgatgccc | tcaaaggaac | 240 |
| cagactggc | tgcgtctgca | agtctgttag | agcagtgata | tcacttcctg | ctaagtgc当地 | 300 |
| tctcccgacc | ataacctgct | ctggatctcg | ctgaaggctc | tctgttatgg | cgattctc当地 | 360 |
| atcgtggatc | tcttaagat | tttcagcaag | caagtatag | aataaattct | cagattttga | 420 |
| gatatactata | tagcgatttt | cagtatcaga | ttgtctatag | tactcatata | tttaagtgtat | 480 |
| tgaatagcat | tctccgattc | cgagttggaa | acacagacac | aatgaa | | 525 |

<210> 52
<211> 1126
<212> DNA
<213> Pinus radiata

| | | | | | | |
|------------|------------|------------|-------------|------------|------------|-----|
| <400> 52 | | | | | | |
| actagtgatt | actatagggc | acgcgtggc | gacggcccg | gctggtaaat | acccaactta | 60 |
| attnaattgt | tattgagcca | gagagatgcg | tagtcgctca | tgtcaatgtt | gtttacaaa | 120 |
| aagacataca | taaacaccc | cacctaaaag | ttataatgtat | aacatgcata | caaccctaca | 180 |
| acgtacgtag | tcacatgcgg | ctagaactta | aacccttacc | acaaacatag | ccacctgcac | 240 |
| ccagaagtta | taataataac | atacatagaa | cccttacaat | aaaaaaagg | atctccaatg | 300 |
| attattaatc | tactgcaggc | cagccatact | cagcttgaac | gtgaaaattc | gtattgtaa | 360 |

| | |
|--|------|
| catggcgcca cattaaaata acctcgccaa tatttcatg tccaagtggc cggccagcca | 420 |
| cgctcctcgc actctgagaa tactctattc atccacttgc ctctgccccg caactcatat | 480 |
| aatgtggcc aacccaagca ccataatccat gttcattaaat cccctcttg ccttcaacta | 540 |
| atccctgtca tcccctcttg ccccaattcc caaagatggc tgccaccaga tcattccgcta | 600 |
| aatccgtgc actttcgca atactgctca tagttcgcc agtacaggct gaagattgct | 660 |
| caaatgccat ggacaaattt gctccatgca cttcagcagt gggactgtct agcaatggag | 720 |
| tgaagccctc atctgagtgc tgtgatgccc tcaaaggaac cagtaactggc tgcgtctgca | 780 |
| aatctgttag agcagtgata tcacttcctg ctaagtgc aa tctccagcc ttaacctgct | 840 |
| ctggatctcg ctgaaggctc tctgttatgg cgattctcag atcgtggatc tcttaagat | 900 |
| tttcaggaag caagtgatag aataaattct cagatgtga gatatctata tagcgatTTT | 960 |
| cagttcaga ttgtctacag taccaatata tttaagtgt tgaatggaaat tctccggattc | 1020 |
| tgagatagaa atataggcac agaatgtggc cggaggaaatg ttcaattcg agaatgataa | 1080 |
| taaataataa atgattgatt tctctctgca aaaaaaaaaaaaaaaa aaaaaaaaa | 1126 |

<210> 53
<211> 454
<212> DNA
<213> Pinus radiata

| | |
|--|-----|
| <400> 53 | |
| atccctgtca tcctctcctg ccccaattcc caaagatggc tgccaccaga tcattccgcta | 60 |
| aattgggtgc acttttgca atactgctca tagttcgcc agcgcaggct caagattgct | 120 |
| caaatgccat ggacaaattt gctccatgca cttcagcagt gggactgtct agcaatggag | 180 |
| tgaagccctc atctgagtgc tgtgatgccc tcaaaggaac cagtaactggc tgcgtctgca | 240 |
| agtctgttag agcagtgata tcacttcctg ctaagtgc aa tctccagcc ataacctgct | 300 |
| ctggatctcg ctgaaggctc tctgttatgg cgattctcag atcgtggata tcttaagat | 360 |
| tttcagcaag tgatagaata aattctcaga tttagagata tctatatacg gattttcagt | 420 |
| atcagattgt ctatagact catatattta agtg | 454 |

<210> 54
<211> 335
<212> DNA
<213> Pinus radiata

| | |
|--|-----|
| <400> 54 | |
| agaagcacct gttaaaaagg aggccgtctc tttgttcatg agcttataga taagccctag | 60 |
| tctgcaagga ttattgcccgt gtagttatTTT ggaagtagat cattttcaca ggcccaagatg | 120 |
| cattatattc taatgcagtt gttgttaat tgaatgc aa atagttccaa aatgtttaca | 180 |
| tgaatcaata gtgaacaaat ccctctgttt tatatcatat tgatggatta ttgcattttt | 240 |
| tggtgacgtg gcgcgaaact gctttcgaa ctcatggaaa tagtaattgt tataatccat | 300 |
| aggcatgaga ttcttggtaa tcgtgcacaa ggttt | 335 |

<210> 55
<211> 336
<212> DNA
<213> Pinus radiata

| | |
|--|-----|
| <400> 55 | |
| aaacacctgtg cacgattaac aagaatctca tgcctatgga ttataacaat tactatttcc | 60 |
| atgagttcga aaagcagttt cgcccacgt cacaaaaaaa tcgaaataatc catcaatatg | 120 |
| atataaaaca gagggatttg ttcaactattt attcatgtaa acatttggaa actatttgc | 180 |
| cttcaattaa caaacaactg cattagaata taatgcattt ggtgcctgtg aaaatgtct | 240 |
| acttccaaat aactacaggg caataatcct tgcagactag ggcttatcta taagctcatg | 300 |
| aacaaagagc aggcctcctt tttaacaggt gcttct | 336 |

<210> 56
<211> 532

<212> DNA
<213> Pinus radiata

<400> 56

| | | | | | | |
|-------------|------------|------------|------------|------------|-------------|-----|
| cgttcgttcc | cttcccttcc | cattgttgcg | ttaagccct | ccaattttct | tttggcgtcc | 60 |
| cgttttggg | gctcccttga | agatctcctc | ttcatttcgg | gatttcctgc | cttcgcccgcg | 120 |
| ccatttgaag | ttctttttct | gagagaagaa | tttagacatg | gctgatcgca | tgttgactcg | 180 |
| aagccacagc | cttcgcgagc | gttggacga | gaccctctct | gctcaccgca | acgatattgt | 240 |
| ggccttcctt | tcaagggtt | aagccaaggg | caaaggcata | ttgcagcgc | accagatttt | 300 |
| tgctgagttt | gaggccatct | ctgaggagag | cagagcaaag | cttcttgatg | gggcctttgg | 360 |
| tgaagtccctc | aaatccactc | aggaagcgat | tgtgtcgct | ccatgggtt | ctcttgctgt | 420 |
| tcgtccaagg | ccggcggtgt | gggagcacat | ccgtgtgaac | gtccatgcgc | ttgttcttga | 480 |
| gcaattggag | gttgctgagt | atctgcactt | caaagaagag | cttgctgatg | ga | 532 |

<210> 57
<211> 3103
<212> DNA
<213> Eucalyptus grandis

<400> 57

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| gggtgaaaac | aattaatgag | atcatttgaa | ttaaggaaag | tggaaaggcg | gttttctgat | 60 |
| tggtacactg | aaacaacagg | aaggtggtgg | aggccgcaat | gatggaattt | atccacttta | 120 |
| atcattttat | gaaatcgata | cactaacctt | tgttctcct | aaacccaaag | gcattaatcc | 180 |
| ctgtcctcct | cactcgatct | cgaaggccag | aagggggagg | ccgagcctct | tgctttttt | 240 |
| cgtgtataaa | agggcctccc | ccattcctca | tttttcacca | tcctccgttc | gttcgttccc | 300 |
| ttccctttcc | atttgtgcgt | ttaagccctc | caattttctt | ttggcgtccc | gtttttgggg | 360 |
| ctcccttga | gatctccct | tcatttcggg | atttcctgc | ttcgcgcgc | catttgaagt | 420 |
| tcttttctg | agagaagaat | ttagacatgg | ctgatecgat | gttgactcg | agccacagcc | 480 |
| ttcgcgagcg | tttggacgag | accctctctg | ctcaccgcaa | cgatattgtg | gccttcctt | 540 |
| caagggttga | agccaagggc | aaaggcatct | tgcagcgc | ccagatttt | gctgagttt | 600 |
| aggccatctc | tgaggagagc | agagcaaagc | ttcttgatgg | ggccttgg | gaagtccctca | 660 |
| aatccactca | ggaagcgatt | gtgtcgcc | catgggttgc | tcttgatgtt | cgtccaaggc | 720 |
| cgggcgtgt | ggagcacatc | cgtgtgaacg | tccatgcgt | tgttcttgag | caattggagg | 780 |
| ttgctgagta | tctgcacttc | aaagaagagc | ttgctgatgg | aagcttgaat | gttaacttt | 840 |
| tgcttgagct | tgactttgag | ccattcactg | cctctttcc | gcccggact | ctttccaagt | 900 |
| ctattggcaa | ttggcgtcgag | tttctcaatc | gccatctctc | cgctaagctc | ttccatgaca | 960 |
| aggaaaagctt | gcaccctctg | cttgaattcc | tccaagtcca | ctgctacaag | gggaagaaca | 1020 |
| tgatggtgaa | tgccagaatc | cagaatgtgt | tctccctcca | acatgtcctg | aggaaggcgg | 1080 |
| aggagtatct | gacctcgctc | aaacccgaga | ccccgtactc | ccagttcgag | cacaagttcc | 1140 |
| aggagatcg | gctcgagcgg | gggtgggtg | acacggctga | gcmcgtc | gagatgatcc | 1200 |
| agctcctgtt | ggatctcctt | gaggctcccg | accctgtgcac | tctcgagaag | ttcttggata | 1260 |
| gggttcccat | ggtcttcaac | gtcgtgatca | tgtctcccc | cgatacttt | gctcaggacg | 1320 |
| acgtccttgg | ttatccggat | accggtgccc | aggttgttta | catcctggat | caagttcg | 1380 |
| cccttagagga | agaaatgtct | caccgcatta | agcaacaagg | actggatatt | actcctcgga | 1440 |
| ttctcattat | cactcggtt | cttccagacg | cggttggAAC | cacctgtggc | cagcgcctt | 1500 |
| agaaaagttt | tgggaccgag | tactcccaca | ttcttcgcgt | ccccttcaga | aatgagaagg | 1560 |
| gagtcgtccg | caagtggatt | tcccggtcg | agggtgtggcc | ctatttggaa | agatacactg | 1620 |
| aggatgtcgc | gagcgaactt | gctggagagt | tgcagggcaa | gcctgatctg | atcatcgaa | 1680 |
| actacagtga | tggaaacatt | gttgcttcc | tgttagcaca | taaatttaggt | gttacacagt | 1740 |
| gtacaatagc | ccatgcctc | gagaagacga | agtacccaga | gtcagacata | tactggaaga | 1800 |
| aatttggaga | aaagtaccac | ttctcttgcc | agttcaactgc | tgtatctc | gccatgaacc | 1860 |
| acaccgactt | cattatcacc | agcaccttcc | aagaaattgc | tggaaagcaag | gatacagtgg | 1920 |
| ggcagtatga | gagtcacatg | aacttcactc | ttcctggact | ctaccgagtt | gtccacggga | 1980 |
| tcgacgtctt | cgaccggaaag | ttcaacattt | tttcaccagg | tgctgacatg | agcatctact | 2040 |
| ttgcttacac | cgaacaggag | cggcggttga | aatccttcca | ccctgagatc | gaggaactcc | 2100 |
| tcttcagcga | tgttgagaac | aaggaacact | tgtgtgtgtt | gaaagataag | aagaagccta | 2160 |
| ttatTTTcac | catggcaagg | ctggaccgtg | tcaagaactt | gacagggtt | gttgagtggt | 2220 |

| | | | | | | |
|--------------|-------------|--------------|-------------|--------------|-------------|------|
| atggcaagaa | ctccaagttg | agggaactcg | ccaaaccttgg | cgtgggttgg | ggtgacagga | 2280 |
| ggaaggattc | gaaggacttg | gaagagcagt | ctgagatgaa | gaaaatgtac | gacctcatcg | 2340 |
| aaaagtacaa | gctgaatggc | cagttcaggt | ggatttcctc | ccagatgaac | cgggtgagga | 2400 |
| atggagagct | ctaccgctac | atctgtgaca | cgaaggggagt | cttcgttcaa | ccggcttatct | 2460 |
| atgaagctt | cgggttggacc | gtgggttggagg | ccatgacttg | tggattgcc | acctttgc | 2520 |
| cttgcataatgg | tggaccagct | gagatcattt | tgcattggcaa | atcgggctac | cacattgtac | 2580 |
| cttaccatgg | tgaccaggcg | gccgagcttc | tttagactt | cttcaacaag | tgcaagattt | 2640 |
| accagtccca | ctgggacgag | atctcaaagg | gtgcattgca | gagaatttggaa | gagaagtata | 2700 |
| catggaaaat | atattctgag | aggctgttga | acctgactgc | cgtgtatggc | ttcttggaa | 2760 |
| atgtgactaa | ccttgatcg | cgcgagagtc | gccgggtac | tgaaatgttc | tatgcctca | 2820 |
| agtatcgccc | actggcacag | tctgttcc | cggctgtcg | gtaaacaaag | agacagattt | 2880 |
| ttaccagaag | acggaagcat | tggactttt | aagtttcaa | ggaataaaaca | ttggaaattt | 2940 |
| tttgaattt | ggatttgc | gagcgatctt | tttgcgttcc | tttttttgtt | ccttttctc | 3000 |
| ttcttgc | ccattcccg | aatgtttgca | ttttgggtt | tgtacccatc | aattcagtaa | 3060 |
| atggttcatt | ttctttcaa | aaaaaaaaaa | aaaaaaaaaa | aaa | | 3103 |

<210> 58
<211> 326
<212> DNA
<213> Eucalyptus grandis

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| <400> 58 | | | | | | |
| ctcgaaaccg | agacgctgac | tgtgggttga | gctctaacc | atgggagtga | tgtctctt | 60 |
| acgtgcctgc | cgtggcccc | agtgcgggc | cccaaaagt | taaacgaagg | aagctccgg | 120 |
| ggatctgatt | ggccgcgac | tccgcctct | acgtggcacc | accgacgatt | ttttttat | 180 |
| atcttgc | atgcctaatt | taactatgg | gtccagatta | gaagcttata | cactatggat | 240 |
| taaattaaat | caaatggaa | ttaaattaaa | ttaaaatcat | cgtgcggagg | tgcacgagat | 300 |
| gcacgagatc | cgacggcgca | gagcag | | | | 326 |

<210> 59
<211> 311
<212> DNA
<213> Eucalyptus grandis

| | | | | | | |
|------------|------------|------------|------------|-------------|------------|-----|
| <400> 59 | | | | | | |
| attactatag | ggcacgcgt | gtcgacggcc | cgggctggta | ctctcaactaa | ttcttagtt | 60 |
| ttccaattt | gcccccttct | taattgctca | tcttctttac | caaattctct | aatttggccg | 120 |
| gcgaagggt | gacaagggt | tggcatgtc | accctcacca | aagggtgccg | aagggtccgt | 180 |
| gacctcagct | gacggccacc | tacaccaa | ctagctact | agcagcctaa | gcccttcata | 240 |
| aactctagtg | aaaggttt | agtattttt | aataaaaaat | ataaaaaaa | tatatagcga | 300 |
| gagctcatta | c | | | | | 311 |

<210> 60
<211> 2096
<212> DNA
<213> Eucalyptus grandis

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| <400> 60 | | | | | | |
| gattactata | gggcacgcgt | ggtcgacggc | ccgggctgg | ctgagccatt | taattcgaga | 60 |
| gcacatcgcc | caaaattatt | cttcttgc | ccataactgt | cgaattttct | cttttaggt | 120 |
| agtaaccaat | gatgcata | gttgacaaa | aggctgatta | gtatgtat | ggagttgtt | 180 |
| gtgcaattt | gcaagctgac | gatggccct | caggaaatt | aaggcgccaa | cccagattgc | 240 |
| aaagagcaca | aagagcacga | tccaacctt | ccttaacaag | atcatcacca | gatggccag | 300 |
| taagggtat | attaattaa | caaata | ttgtaccgg | aactccgtat | ttctctact | 360 |
| tccataaacc | cctgattaat | ttgttggaa | agcgacagcc | aacccacaaa | aggtcagat | 420 |
| tcatcccacg | agagagagag | agagagagag | agagagagag | agattttct | ctctatattc | 480 |
| tggttcac | gttggagtca | atggcatgc | tgacgaatgt | acatattgg | gtagggtcca | 540 |

| | |
|---|------|
| atattttgcg ggaggggttgg tgaaccgcaa agttcctata tatcgAACCT ccaccacat | 600 |
| acctcaattc aatccccacc atttatccgt ttatTTTCTC ctgCTTCCT ttgCTCGAGT | 660 |
| ctcgCGGAAG agagagaaga gaggagagga gagaatGGGT tcgACCGGAT ccgAGACCCA | 720 |
| gatgACCCCG ACCCAAGTCT cgAACGAGGA ggcGAACCTC ttCGCCATGC agCTGGCGAG | 780 |
| cgCTCCGTG CTCCCCATGG tcCTCAAGGC CGCCATCGAG ctCGACCTCC tcGAGATCAT | 840 |
| ggCCAAGGCC GGGCCGGCG CGTTCTCTC CCCGGGGAA gTCGCGGCC AGCTCCCAGAC | 900 |
| ccAGAACCCC gaggCACCCG tcatGCTCGA CGGATCTC CGGCTGCTGG CCAGCTACTC | 960 |
| cgtGCTCACG TGCACCTCC GCGACCTCCC CGATGGCAAG gTCGAGCGGC TCTACGGCTT | 1020 |
| AGCGCCGGTG TGCAAGTTCT TGGTCAAGAA CGAGGACGGG GTCTCCATCG CGCactCAA | 1080 |
| | |
| cttgatGAAC caggacaaaa tcCTCATGGA aagCTGGT tacCTGAAAG ATGCGGTCT | 1140 |
| tgaaggCGGA atcccATTCA acaAGGCgTA CGGGATGACC GCGTTCGAGT ATCATGGCAC | 1200 |
| cgACCCCGCGA ttcaacaaga tCTTTAACCG gggAAATGTCT gATCACTCCA CCATTACTAT | 1260 |
| gaAGAAAGATA ctggAAACAT acaAGGGCTT CGAGGGCCTC gagACCGTGG tcGATGTCGG | 1320 |
| aggCGGCAct GGGGCCGTGC tcAGCATGAT CGTTGCCAAA TACCCATCAA TGAAGGGAT | 1380 |
| caACTTCGAC CGCCCCAACG gATTGAAGAC GCCCCACCCC ttCCtGGTGT CAAGCACGTC | 1440 |
| ggAGGGCGACA tgTTCGTCAG CGTTCCAAAG ggAGATGCCA ttTTCATGAA gtGGATATGC | 1500 |
| catGACTGGA gtGACGACCA ttGCGCGAAg ttCCtCAAGA ACTGCTACGA TGCCTTCCC | 1560 |
| aacaATGGAA aggtGATCGT tgCAGAGTGC gTACTCCCTG TGTACCCAGA CACGAGCCTA | 1620 |
| gCGACCAAGA atGTGATCCA catCGACTGC atCATGTTGG CCCACAACCC aggCGGGAAA | 1680 |
| gagAGGACAC agaAGGAGTT CGAGGCATTG GCCAAAGGGG CGGGATTCA gggCTTCCAA | 1740 |
| gtCATGTGCT GCGCTTCCG CACTCACGTC ATGGAGTTCC tGAAGACCgC ttGATCTGCT | 1800 |
| cCTCTGTGGT gATGTTCATG gTTCTGGAT ttGAAAGGTC gTGAAGGAGC CCTTTCTCA | 1860 |
| cAGTTGGCTT CGGCATAACCA ATTCTTCTC ATAAAAGGAA ACAATAAGAA GCGACTGTAT | 1920 |
| gatGGCGCAA gtGGAAGGTT CAAGATTGT TGTtTTATGT CTATAAAGTT ttGAGTCTTC | 1980 |
| TGCACTACTGA ttTCACAGAA TGTGTAACGA AACGGCGTAT ATGGATGTGC CTGAATGATG | 2040 |
| gaaATTGTGA tATTCTGTCT tCTTTTCAG TAAATCACTT CGAACAAAAAA AAAAaaa | 2096 |

<210> 61
<211> 522
<212> DNA
<213> Eucalyptus grandis

<400> 61

| | |
|---|-----|
| ctaaaACGCT aatCCTGCCC tGCCCTTCCC ttCTGCTGCT gCTGCTCGTC acCTCTCTCT | 60 |
| CCCTCTCGCG GCGAGCTCGCG agATCTGCCG agTTAAgCC tCGTACATCA aaATGGGtaa | 120 |
| ggAGAAAGATT cacATCAGCA ttGTGGTcat tGGCCATGTC gATTCTGGGA AGTCAACCCAC | 180 |
| aACTGGCCAC ttGATATACA AGCTCGGAGG aATCGACAAg CGTGTGATTG AGAGATTGCA | 240 |
| gaAGGAAGCT gCTGAGATGA aCAAGAGATC gTTCAAGTAT gCTTGGGTGC ttGACAAGCT | 300 |
| caAGGCCGAG CGCGAGCGCG gtATTACCAT tGATATTGCC ttGTGGAAgT TCAGACCCAC | 360 |
| caAGTACTAC tGCACTGTCA ttGATGCTCC tGGACATCGT gACTTTATTa AGAATATGAT | 420 |
| TACTGGAACC tCCCAAGGCCG ACTGTGCTGT CCTTATCATT gATTCCACCA CTGGTGGTTT | 480 |
| CgAGCTGGT ATTtCCAAGG ATGGCCAGAC CGGTGAACAT GC | 522 |

<210> 62
<211> 420
<212> DNA
<213> Eucalyptus grandis

<400> 62

| | |
|---|-----|
| tttGATACGC taACAAACAA AACATGTGAA aAGCTTAATT ATGGCAATTa TCATAAATAG | 60 |
| aaaaAAATTa gAAAAAAAGA gAGGAATGG gCCATTATTt AAATTGCAAT CGAAAGATTG | 120 |
| AGGGCAATTc tGTTTCTCTA GTGTAATAA gGGTGTATTt AATAATTGAG GGATGGAAT | 180 |
| AGCATGGTCA CTGGTAAATT ATCAAGGAAA GCAAGAATAA AAATGGAAA aaaaaaaaaa | 240 |
| AAAGCTTGAA gAGGCCAATG TCGAAATTAT gAGCGCGAGA TGAGGACACT CCTGGAAAC | 300 |
| gAAAAATGGC ATTGCGGGG GGTGCTATAA AAAGCTCGT gTAAGGGTGC GTTCTCACT | 360 |
| CTCAAACCCt AATCCTGCCC TTCCCTTCTG CTGCTGCTGC TCGTACCTC TCTCCCT | 420 |

<210> 63
<211> 65
<212> PRT
<213> Eucalyptus grandis

<400> 63
Met Asp Asn Ser Lys Met Gly Phe Asn Ala Gly Gln Ala Lys Gly Gln
1 5 10 15
Thr Gln Glu Lys Ser Asn Gln Met Met Asp Lys Ala Ser Asn Thr Ala
20 25 30
Gln Ser Ala Arg Asp Ser Met Gln Glu Thr Gly Gln Gln Met Lys Ala
35 40 45
Lys Ala Gln Gly Ala Ala Asp Ala Val Lys Asn Ala Thr Gly Met Asn
50 55 60
Lys
65

<210> 64
<211> 152
<212> PRT
<213> Eucalyptus grandis

<400> 64
Met Gly Gly Pro Leu Thr Leu Asp Ala Glu Val Glu Val Lys Ser Pro
1 5 10 15
Ala Asp Lys Phe Trp Val Ser Val Arg Asp Ser Thr Lys Leu Phe Pro
20 25 30
Lys Ile Phe Pro Asp Gln Tyr Lys Asn Ile Glu Val Leu Glu Gly Asp
35 40 45
Gly Lys Ala Pro Gly Ser Val Arg Leu Phe Thr Tyr Gly Glu Gly Ser
50 55 60
Pro Leu Val Lys Val Ser Lys Glu Lys Ile Asp Gly Val Asp Glu Ala
65 70 75 80
Asp Lys Val Val Thr Tyr Ser Val Ile Asp Gly Asp Leu Leu Lys Tyr
85 90 95
Tyr Lys Asn Phe Asn Gly Ser Ile Lys Val Ile Pro Lys Gly Asp Gly
100 105 110
Ser Leu Val Lys Trp Ser Cys Gly Phe Glu Lys Ala Ser Asp Glu Ile
115 120 125
Pro Asp Pro His Val Ile Lys Asp Phe Ala Ile Gln Asn Phe Lys Glu
130 135 140
Leu Asp Glu Phe Ile Leu Lys Ala
145 150

<210> 65
<211> 117
<212> PRT
<213> Eucalyptus grandis

<400> 65
Met Ala Ala Asn Phe Val Ile Pro Thr Lys Met Lys Ala Trp Val Tyr
1 5 10 15
Arg Glu His Gly Asn Val Ala Asp Val Leu Gly Leu Asp Pro Glu Leu
20 25 30
Lys Val Pro Glu Leu Gln Glu Gly Gln Val Leu Val Lys Val Leu Ala
35 40 45

Ala Ala Leu Asn Pro Val Asp Ala Ala Arg Met Lys Gly Val Ile Lys
 50 55 60
 Leu Pro Gly Phe Ser Leu Pro Ala Val Pro Gly Tyr Asp Leu Ala Gly
 65 70 75 80
 Val Val Val Lys Val Gly Arg Glu Val Lys Glu Leu Lys Ile Gly Asp
 85 90 95
 Glu Val Tyr Gly Phe Met Phe His Ala Lys Lys Asp Gly Thr Leu Ala
 100 105 110
 Glu Tyr Ala Ala Val
 115

<210> 66
 <211> 318
 <212> PRT
 <213> Eucalyptus grandis

<400> 66
 Met Ala Ala Asn Phe Val Ile Pro Thr Lys Met Lys Ala Trp Val Tyr
 1 5 10 15
 Arg Glu His Gly Asp Val Ala Asn Val Leu Gly Leu Asp Pro Glu Leu
 20 25 30
 Lys Val Pro Glu Leu Gln Glu Gly Gln Val Leu Val Lys Val Leu Ala
 35 40 45
 Ala Ala Leu Asn Pro Ile Asp Thr Ala Arg Val Lys Gly Val Ile Lys
 50 55 60
 Leu Pro Gly Phe Ser Leu Pro Ala Val Pro Gly Tyr Asp Leu Ala Gly
 65 70 75 80
 Val Val Val Lys Val Gly Arg Glu Val Lys Glu Leu Lys Val Gly Asp
 85 90 95
 Glu Val Tyr Gly Phe Met Phe His Ala Lys Lys Asp Gly Thr Leu Ala
 100 105 110
 Glu Tyr Ala Ala Val Glu Glu Ser Phe Leu Ala Leu Lys Pro Lys Lys
 115 120 125
 Leu Arg Phe Gly Glu Ala Ala Ser Leu Pro Val Val Ile Gln Thr Ala
 130 135 140
 Tyr Gly Gly Leu Glu Arg Ala Gly Leu Ser His Gly Lys Ser Leu Leu
 145 150 155 160
 Val Leu Gly Gly Ala Gly Gly Val Gly Thr Leu Ile Ile Gln Leu Ala
 165 170 175
 Lys Glu Val Phe Gly Ala Ser Arg Val Ala Ala Thr Ser Ser Thr Gly
 180 185 190
 Lys Leu Glu Leu Leu Lys Ser Leu Gly Ala Asp Leu Ala Ile Asp Tyr
 195 200 205
 Thr Lys Val Asn Phe Glu Asp Leu Pro Glu Lys Phe Asp Val Val Tyr
 210 215 220
 Asp Thr Val Gly Glu Ile Glu Arg Ala Ala Lys Ala Val Lys Pro Gly
 225 230 235 240
 Gly Ser Ile Val Thr Ile Val Lys Gln Asn Lys Thr Leu Pro Pro Pro
 245 250 255
 Ala Phe Phe Ala Val Thr Ser Asn Arg Ser Thr Leu Glu Lys Leu
 260 265 270
 Lys Pro Phe Leu Glu Ser Gly Lys Val Lys Pro Val Ile Asp Pro Lys
 275 280 285
 Ser Pro Phe Pro Phe Ser Gln Ala Ile Glu Ala Phe Ser Tyr Leu Gln
 290 295 300
 Thr Arg Arg Ala Thr Gly Lys Leu Val Ile His Pro Val Pro
 305 310 315

<210> 67
<211> 156
<212> PRT
<213> Eucalyptus grandis

<400> 67
Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15
Val Glu Ser Ser Asp Thr Val Asp Asn Val Lys Ala Lys Ile Gln Asp
20 25 30
Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys
35 40 45
Gln Leu Glu Asp Gly Arg Thr Leu Ala Asp Tyr Asn Ile Gln Lys Glu
50 55 60
Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly Met Gln Ile Phe
65 70 75 80
Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Ser Ser
85 90 95
Asp Thr Val Asp Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile
100 105 110
Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp
115 120 125
Gly Arg Thr Leu Ala Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His
130 135 140
Leu Val Leu Arg Leu Lys Gly Gly Met Gln Ile Phe
145 150 155

<210> 68
<211> 238
<212> PRT
<213> Eucalyptus grandis

<400> 68
Met Ala Thr His Ala Ala Leu Ala Pro Ser Thr Leu Pro Ala Asn Ala
1 5 10 15
Lys Phe Ser Ser Lys Ser Ser Ser His Ser Phe Pro Thr Gln Cys Phe
20 25 30
Ser Lys Arg Leu Glu Val Ala Glu Phe Ser Gly Leu Arg Ala Gly Ser
35 40 45
Cys Val Thr Tyr Ala Lys Asn Ala Gly Glu Gly Ser Phe Phe Asp Ala
50 55 60
Val Ala Ala Gln Leu Thr Pro Lys Thr Ser Ala Pro Ala Pro Ala Lys
65 70 75 80
Gly Glu Thr Val Ala Lys Leu Lys Val Ala Ile Asn Gly Phe Gly Arg
85 90 95
Ile Gly Arg Asn Phe Leu Arg Cys Trp His Gly Arg Lys Asn Ser Pro
100 105 110
Leu Asp Val Ile Val Val Asn Asp Ser Gly Gly Val Lys Asn Ala Ser
115 120 125
His Leu Leu Lys Tyr Asp Ser Met Leu Gly Thr Phe Lys Ala Asp Val
130 135 140
Lys Ile Val Asp Asn Glu Thr Ile Ser Val Asp Gly Lys Pro Val Lys
145 150 155 160
Val Val Ser Asn Arg Asp Pro Leu Lys Leu Pro Trp Ala Glu Leu Gly
165 170 175
Ile Asp Ile Val Ile Glu Gly Thr Gly Val Phe Val Asp Gly Pro Gly

| | | |
|---|-----|-----|
| 180 | 185 | 190 |
| Ala Gly Lys His Ile Gln Ala Gly Ala Lys Lys Val Ile Ile Thr Ala | | |
| 195 | 200 | 205 |
| Pro Ala Lys Gly Ala Asp Ile Pro Thr Tyr Val Tyr Gly Val Asn Glu | | |
| 210 | 215 | 220 |
| Thr Asp Tyr Ser His Glu Val Ala Asn Ile Ile Ser Asn Ala | | |
| 225 | 230 | 235 |

<210> 69
<211> 168
<212> PRT
<213> Eucalyptus grandis

| | | |
|---|-----|-----|
| <400> 69 | | |
| Met Ser Thr Ser Pro Val Ser Ser Trp Cys Ala Thr Ser Phe Ser Pro | | |
| 1 | 5 | 10 |
| Ala His Ser Ser Leu Lys Arg Ala Ala Gly Leu Arg Pro Ser Leu Ser | | |
| 20 | 25 | 30 |
| Ala Arg Leu Gly Pro Ser Ser Ser Ser Val Ser Pro Pro Thr | | |
| 35 | 40 | 45 |
| Leu Ile Arg Asn Glu Pro Val Phe Ala Ala Pro Ala Pro Val Ile Asn | | |
| 50 | 55 | 60 |
| Pro Thr Trp Thr Glu Glu Met Gly Lys Asp Tyr Asp Glu Ala Ile Glu | | |
| 65 | 70 | 75 |
| Ala Leu Lys Lys Leu Leu Ser Glu Lys Gly Asp Leu Lys Ala Thr Ala | | |
| 85 | 90 | 95 |
| Ala Ala Lys Val Glu Gln Ile Thr Ala Glu Leu Gln Thr Ala Ser Pro | | |
| 100 | 105 | 110 |
| Asp Ile Lys Pro Ser Ser Val Asp Arg Ile Lys Thr Gly Phe Thr | | |
| 115 | 120 | 125 |
| Phe Phe Lys Lys Glu Lys Tyr Asp Lys Asn Pro Ala Leu Tyr Gly Glu | | |
| 130 | 135 | 140 |
| Leu Ala Lys Gln Ser Pro Lys Phe Met Val Phe Ala Cys Ser Asp Ser | | |
| 145 | 150 | 155 |
| Arg Val Cys Pro Ser His Val Leu | | |
| 165 | | |

<210> 70
<211> 214
<212> PRT
<213> Eucalyptus grandis

| | | |
|---|-----|-----|
| <400> 70 | | |
| Met Pro Cys Pro Arg Ala Pro Pro Met Met Glu Arg Arg Ile Lys Pro | | |
| 1 | 5 | 10 |
| Gln Thr Glu Gln Ala Leu Lys Cys Pro Arg Cys Asp Ser Thr Asn Thr | | |
| 20 | 25 | 30 |
| Lys Phe Cys Tyr Tyr Asn Asn Tyr Asn Leu Ser Gln Pro Arg His Phe | | |
| 35 | 40 | 45 |
| Cys Lys Thr Cys Arg Arg Tyr Trp Thr Lys Gly Gly Ala Leu Arg Asn | | |
| 50 | 55 | 60 |
| Val Pro Val Gly Gly Cys Arg Lys Asn Lys Arg Ala Lys Arg Ala | | |
| 65 | 70 | 75 |
| Val Asp His Pro Val Ser Ala Gln Asn Glu Ala Ser Thr Ser Ala Ala | | |
| 85 | 90 | 95 |
| Pro Gly Asn Glu Val Pro Asp Arg Ser Pro Phe Glu Pro Pro Ser Ser | | |
| 100 | 105 | 110 |

Lys Ser Ile Tyr Tyr Gly Gly Glu Asn Met Asn Leu Thr Gly Leu Pro
 115 120 125
 Phe Ser Arg Ile Gln Gln Asp Arg Ala Ala Leu Ala His Cys Asn Ser
 130 135 140
 Ser Ser Phe Leu Gly Met Ser Cys Gly Thr Gln Ser Ala Ser Leu Glu
 145 150 155 160
 Pro His Leu Ser Ala Leu Asn Thr Phe Asn Ser Phe Lys Ser Asn Asn
 165 170 175
 Pro Gly Leu Asp Phe Pro Ser Leu Ser Thr Asp Gln Asn Ser Leu Phe
 180 185 190
 Glu Thr Ser Gln Pro Gln Leu Ser Arg Ala Met Ala Ser Ala Leu Phe
 195 200 205
 Ser Met Pro Met Ala Pro
 210

<210> 71
 <211> 166
 <212> PRT
 <213> Pinus radiata

<400> 71

Met Ala Ala Leu Ala Thr Thr Glu Val Cys Asp Thr Tyr Pro Arg Leu
 1 5 10 15
 Val Glu Asn Gly Glu Leu Arg Val Leu Gln Pro Ile Phe Gln Ile Tyr
 20 25 30
 Gly Arg Arg Arg Ala Phe Ser Gly Pro Ile Val Thr Leu Lys Val Phe
 35 40 45
 Glu Asp Asn Val Leu Leu Arg Glu Phe Leu Glu Glu Arg Gly Asn Gly
 50 55 60
 Arg Val Leu Val Val Asp Gly Gly Ser Leu Arg Cys Ala Ile Leu
 65 70 75 80
 Gly Gly Asn Val Val Val Ser Ala Gln Asn Asn Gly Trp Ser Gly Ile
 85 90 95
 Ile Val Thr Gly Cys Ile Arg Asp Val Asp Glu Ile Asn Arg Cys Asp
 100 105 110
 Ile Gly Ile Arg Ala Leu Thr Ser Asn Pro Leu Lys Ala Asn Lys Lys
 115 120 125
 Gly Val Gly Glu Lys His Ala Pro Ile Tyr Ile Ala Gly Thr Arg Ile
 130 135 140
 Leu Pro Gly Glu Trp Cys Tyr Ala Asp Ser Asp Gly Ile Leu Val Ser
 145 150 155 160
 Gln Gln Glu Leu Ser Leu
 165

<210> 72
 <211> 236
 <212> PRT
 <213> Pinus radiata

<400> 72

Met Leu Val Leu Ile Ile Phe Gly Cys Cys Phe Ile Gly Val Ile Ala
 1 5 10 15
 Thr Ser Phe Asp Phe Tyr Tyr Phe Val Gln Gln Trp Pro Gly Ser Tyr
 20 25 30
 Cys Asp Thr Arg Arg Gly Cys Cys Tyr Pro Arg Thr Gly Arg Pro Ala
 35 40 45
 Ser Glu Phe Ser Ile His Gly Leu Trp Pro Asn Tyr Lys Thr Gly Lys

| | | |
|---|-----|-----|
| 50 | 55 | 60 |
| Trp Pro Gln Phe Cys Gly Ser Ser Glu Glu Phe Asp Tyr Ser Lys Ile | | |
| 65 | 70 | 75 |
| Ser Asp Leu Glu Glu Leu Asn Arg Tyr Trp Gly Ser Leu Ser Cys | | 80 |
| 85 | 90 | 95 |
| Pro Ser Ser Asp Gly Gln Glu Phe Trp Gly His Glu Trp Glu Lys His | | |
| 100 | 105 | 110 |
| Gly Thr Cys Ser Leu Asn Leu Asp Glu His Ser Tyr Phe Glu Lys Ala | | |
| 115 | 120 | 125 |
| Leu Ser Leu Arg Gln Asn Ile Asp Ile Leu Gly Ala Leu Lys Thr Ala | | |
| 130 | 135 | 140 |
| Gly Ile Lys Pro Asp Gly Ser Gln Tyr Ser Leu Ser Asp Ile Lys Glu | | |
| 145 | 150 | 155 |
| Ala Ile Lys Gln Asn Thr Gly Gln Leu Pro Gly Ile Asp Cys Asn Thr | | 160 |
| 165 | 170 | 175 |
| Ser Ala Glu Gly Glu His Gln Leu Tyr Gln Val Tyr Val Cys Val Asp | | |
| 180 | 185 | 190 |
| Lys Ser Asp Ala Ser Thr Val Ile Glu Cys Pro Ile Tyr Pro His Ser | | |
| 195 | 200 | 205 |
| Asn Cys Pro Ser Met Val Val Phe Pro Pro Phe Gly Glu Asp Gln Glu | | |
| 210 | 215 | 220 |
| Asp Arg Asp Gly Tyr Thr Glu Gly Met Tyr Glu Leu | | |
| 225 | 230 | 235 |

<210> 73

<211> 92

<212> PRT

<213> Pinus radiata

<400> 73

| | | |
|---|----|----|
| Met Ala Ala Pro Arg Ser Ser Ala Lys Leu Gly Ala Leu Leu Ala Ile | | |
| 1 | 5 | 10 |
| Leu Leu Ile Val Ala Ala Ala Gln Ala Gln Asp Cys Ser Asn Ala Met | | 15 |
| 20 | 25 | 30 |
| Asp Lys Leu Ala Pro Cys Thr Ser Ala Val Gly Leu Ser Ser Asn Gly | | |
| 35 | 40 | 45 |
| Val Lys Pro Ser Ser Glu Cys Cys Asp Ala Leu Lys Gly Thr Ser Thr | | |
| 50 | 55 | 60 |
| Gly Cys Val Cys Lys Ser Val Arg Ala Val Ile Ser Leu Pro Ala Lys | | |
| 65 | 70 | 75 |
| Cys Asn Leu Pro Ala Ile Thr Cys Ser Gly Ser Arg | | 80 |
| 85 | 90 | |

<210> 74

<211> 92

<212> PRT

<213> Pinus radiata

<400> 74

| | | |
|---|----|----|
| Met Ala Ala Pro Arg Ser Ser Ala Lys Ser Ala Ala Leu Phe Ala Ile | | |
| 1 | 5 | 10 |
| Leu Leu Ile Val Ala Ala Val Gln Ala Glu Asp Cys Ser Asn Ala Met | | 15 |
| 20 | 25 | 30 |
| Asp Lys Leu Ala Pro Cys Thr Ser Ala Val Gly Leu Ser Ser Asn Gly | | |
| 35 | 40 | 45 |
| Val Lys Pro Ser Ser Glu Cys Cys Asp Ala Leu Lys Gly Thr Ser Thr | | |
| 50 | 55 | 60 |

Gly Cys Val Cys Lys Ser Val Arg Ala Val Ile Ser Leu Pro Ala Lys
65 70 75 80
Cys Asn Leu Pro Ala Leu Thr Cys Ser Gly Ser Arg
85 90

<210> 75

<211> 92

<212> PRT

<213> Pinus radiata

<400> 75

Met Ala Ala Pro Arg Ser Ser Ala Lys Leu Gly Ala Leu Leu Ala Ile
1 5 10 15
Leu Leu Ile Val Ala Ala Ala Gln Ala Gln Asp Cys Ser Asn Ala Met
20 25 30
Asp Lys Leu Ala Pro Cys Thr Ser Ala Val Gly Leu Ser Ser Asn Gly
35 40 45
Val Lys Pro Ser Ser Glu Cys Cys Asp Ala Leu Lys Gly Thr Ser Thr
50 55 60
Gly Cys Val Cys Lys Ser Val Arg Ala Val Ile Ser Leu Pro Ala Lys
65 70 75 80
Cys Asn Leu Pro Ala Ile Thr Cys Ser Gly Ser Arg
85 90

<210> 76

<211> 125

<212> PRT

<213> Eucalyptus grandis

<400> 76

Met Ala Asp Arg Met Leu Thr Arg Ser His Ser Leu Arg Glu Arg Leu
1 5 10 15
Asp Glu Thr Leu Ser Ala His Arg Asn Asp Ile Val Ala Phe Leu Ser
20 25 30
Arg Val Glu Ala Lys Gly Lys Gly Ile Leu Gln Arg His Gln Ile Phe
35 40 45
Ala Glu Phe Glu Ala Ile Ser Glu Glu Ser Arg Ala Lys Leu Leu Asp
50 55 60
Gly Ala Phe Gly Glu Val Leu Lys Ser Thr Gln Glu Ala Ile Val Ser
65 70 75 80
Pro Pro Trp Val Ala Leu Ala Val Arg Pro Arg Pro Gly Val Trp Glu
85 90 95
His Ile Arg Val Asn Val His Ala Leu Val Leu Glu Gln Leu Glu Val
100 105 110
Ala Glu Tyr Leu His Phe Lys Glu Glu Leu Ala Asp Gly
115 120 125

<210> 77

<211> 805

<212> PRT

<213> Eucalyptus grandis

<400> 77

Met Ala Asp Arg Met Leu Thr Arg Ser His Ser Leu Arg Glu Arg Leu
1 5 10 15
Asp Glu Thr Leu Ser Ala His Arg Asn Asp Ile Val Ala Phe Leu Ser
20 25 30

Arg Val Glu Ala Lys Gly Lys Gly Ile Leu Gln Arg His Gln Ile Phe
 35 40 45
 Ala Glu Phe Glu Ala Ile Ser Glu Glu Ser Arg Ala Lys Leu Leu Asp
 50 55 60
 Gly Ala Phe Gly Glu Val Leu Lys Ser Thr Gln Glu Ala Ile Val Ser
 65 70 75 80
 Pro Pro Trp Val Ala Leu Ala Val Arg Pro Arg Pro Gly Val Trp Glu
 85 90 95
 His Ile Arg Val Asn Val His Ala Leu Val Leu Glu Gln Leu Glu Val
 100 105 110
 Ala Glu Tyr Leu His Phe Lys Glu Glu Leu Ala Asp Gly Ser Leu Asn
 115 120 125
 Gly Asn Phe Val Leu Glu Leu Asp Phe Glu Pro Phe Thr Ala Ser Phe
 130 135 140
 Pro Arg Pro Thr Leu Ser Lys Ser Ile Gly Asn Gly Val Glu Phe Leu
 145 150 155 160
 Asn Arg His Leu Ser Ala Lys Leu Phe His Asp Lys Glu Ser Leu His
 165 170 175
 Pro Leu Leu Glu Phe Leu Gln Val His Cys Tyr Lys Gly Lys Asn Met
 180 185 190
 Met Val Asn Ala Arg Ile Gln Asn Val Phe Ser Leu Gln His Val Leu
 195 200 205
 Arg Lys Ala Glu Glu Tyr Leu Thr Ser Leu Lys Pro Glu Thr Pro Tyr
 210 215 220
 Ser Gln Phe Glu His Lys Phe Gln Glu Ile Gly Leu Glu Arg Gly Trp
 225 230 235 240
 Gly Asp Thr Ala Glu Arg Val Leu Glu Met Ile Gln Leu Leu Asp
 245 250 255
 Leu Leu Glu Ala Pro Asp Pro Cys Thr Leu Glu Lys Phe Leu Asp Arg
 260 265 270
 Val Pro Met Val Phe Asn Val Val Ile Met Ser Pro His Gly Tyr Phe
 275 280 285
 Ala Gln Asp Asp Val Leu Gly Tyr Pro Asp Thr Gly Gly Gln Val Val
 290 295 300
 Tyr Ile Leu Asp Gln Val Arg Ala Leu Glu Glu Met Leu His Arg
 305 310 315 320
 Ile Lys Gln Gln Gly Leu Asp Ile Thr Pro Arg Ile Leu Ile Ile Thr
 325 330 335
 Arg Leu Leu Pro Asp Ala Val Gly Thr Thr Cys Gly Gln Arg Leu Glu
 340 345 350
 Lys Val Phe Gly Thr Glu Tyr Ser His Ile Leu Arg Val Pro Phe Arg
 355 360 365
 Asn Glu Lys Gly Val Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp
 370 375 380
 Pro Tyr Leu Glu Arg Tyr Thr Glu Asp Val Ala Ser Glu Leu Ala Gly
 385 390 395 400
 Glu Leu Gln Gly Lys Pro Asp Leu Ile Ile Gly Asn Tyr Ser Asp Gly
 405 410 415
 Asn Ile Val Ala Ser Leu Leu Ala His Lys Leu Gly Val Thr Gln Cys
 420 425 430
 Thr Ile Ala His Ala Leu Glu Lys Thr Lys Tyr Pro Glu Ser Asp Ile
 435 440 445
 Tyr Trp Lys Lys Phe Glu Glu Lys Tyr His Phe Ser Cys Gln Phe Thr
 450 455 460
 Ala Asp Leu Ile Ala Met Asn His Thr Asp Phe Ile Ile Thr Ser Thr
 465 470 475 480
 Phe Gln Glu Ile Ala Gly Ser Lys Asp Thr Val Gly Gln Tyr Glu Ser

| | | |
|---|-----|-----|
| 485 | 490 | 495 |
| His Met Asn Phe Thr Leu Pro Gly Leu Tyr Arg Val Val His Gly Ile | | |
| 500 | 505 | 510 |
| Asp Val Phe Asp Pro Lys Phe Asn Ile Val Ser Pro Gly Ala Asp Met | | |
| 515 | 520 | 525 |
| Ser Ile Tyr Phe Ala Tyr Thr Glu Gln Glu Arg Arg Leu Lys Ser Phe | | |
| 530 | 535 | 540 |
| His Pro Glu Ile Glu Glu Leu Leu Phe Ser Asp Val Glu Asn Lys Glu | | |
| 545 | 550 | 555 |
| His Leu Cys Val Leu Lys Asp Lys Lys Pro Ile Ile Phe Thr Met | | |
| 565 | 570 | 575 |
| Ala Arg Leu Asp Arg Val Lys Asn Leu Thr Gly Leu Val Glu Trp Tyr | | |
| 580 | 585 | 590 |
| Gly Lys Asn Ser Lys Leu Arg Glu Leu Ala Asn Leu Val Val Val Gly | | |
| 595 | 600 | 605 |
| Gly Asp Arg Arg Lys Asp Ser Lys Asp Leu Glu Glu Gln Ser Glu Met | | |
| 610 | 615 | 620 |
| Lys Lys Met Tyr Asp Leu Ile Glu Lys Tyr Lys Leu Asn Gly Gln Phe | | |
| 625 | 630 | 635 |
| Arg Trp Ile Ser Ser Gln Met Asn Arg Val Arg Asn Gly Glu Leu Tyr | | |
| 645 | 650 | 655 |
| Arg Tyr Ile Cys Asp Thr Lys Gly Val Phe Val Gln Pro Ala Ile Tyr | | |
| 660 | 665 | 670 |
| Glu Ala Phe Gly Leu Thr Val Val Glu Ala Met Thr Cys Gly Leu Pro | | |
| 675 | 680 | 685 |
| Thr Phe Ala Thr Cys Asn Gly Gly Pro Ala Glu Ile Ile Val His Gly | | |
| 690 | 695 | 700 |
| Lys Ser Gly Tyr His Ile Asp Pro Tyr His Gly Asp Gln Ala Ala Glu | | |
| 705 | 710 | 715 |
| Leu Leu Val Asp Phe Phe Asn Lys Cys Lys Ile Asp Gln Ser His Trp | | |
| 725 | 730 | 735 |
| Asp Glu Ile Ser Lys Gly Ala Met Gln Arg Ile Glu Glu Lys Tyr Thr | | |
| 740 | 745 | 750 |
| Trp Lys Ile Tyr Ser Glu Arg Leu Leu Asn Leu Thr Ala Val Tyr Gly | | |
| 755 | 760 | 765 |
| Phe Trp Lys His Val Thr Asn Leu Asp Arg Arg Glu Ser Arg Arg Tyr | | |
| 770 | 775 | 780 |
| Leu Glu Met Phe Tyr Ala Leu Lys Tyr Arg Pro Leu Ala Gln Ser Val | | |
| 785 | 790 | 795 |
| Pro Pro Ala Val Glu | | |
| 805 | | |

<210> 78
<211> 264
<212> PRT
<213> Eucalyptus grandis

| | | |
|---|----|----|
| <400> 78 | | |
| Met Gly Ser Thr Gly Ser Glu Thr Gln Met Thr Pro Thr Gln Val Ser | | |
| 1 | 5 | 10 |
| | | 15 |
| Asp Glu Glu Ala Asn Leu Phe Ala Met Gln Leu Ala Ser Ala Ser Val | | |
| 20 | 25 | 30 |
| Leu Pro Met Val Leu Lys Ala Ala Ile Glu Leu Asp Leu Leu Glu Ile | | |
| 35 | 40 | 45 |
| Met Ala Lys Ala Gly Pro Gly Ala Phe Leu Ser Pro Gly Glu Val Ala | | |
| 50 | 55 | 60 |
| Ala Gln Leu Pro Thr Gln Asn Pro Glu Ala Pro Val Met Leu Asp Arg | | |

| | | | |
|---|-----------------------------|-----|-----|
| 65 | 70 | 75 | 80 |
| Ile Phe Arg Leu Leu Ala Ser Tyr Ser Val | Leu Thr Cys Thr Leu Arg | | |
| 85 | 90 | 95 | |
| Asp Leu Pro Asp Gly Lys Val Glu Arg | Leu Tyr Gly Leu Ala Pro Val | | |
| 100 | 105 | 110 | |
| Cys Lys Phe Leu Val Lys Asn Glu Asp Gly Val Ser | Ile Ala Ala Leu | | |
| 115 | 120 | 125 | |
| Asn Leu Met Asn Gln Asp Lys Ile Leu Met Glu Ser | Trp Tyr Tyr Leu | | |
| 130 | 135 | 140 | |
| Lys Asp Ala Val Leu Glu Gly Gly Ile Pro Phe Asn | Lys Ala Tyr Gly | | |
| 145 | 150 | 155 | 160 |
| Met Thr Ala Phe Glu Tyr His Gly Thr Asp Pro Arg | Phe Asn Lys Ile | | |
| 165 | 170 | 175 | |
| Phe Asn Arg Gly Met Ser Asp His Ser Thr Ile Thr | Met Lys Lys Ile | | |
| 180 | 185 | 190 | |
| Leu Glu Thr Tyr Lys Gly Phe Glu Gly Leu Glu Thr | Val Val Asp Val | | |
| 195 | 200 | 205 | |
| Gly Gly Gly Thr Gly Ala Val Leu Ser Met Ile Val | Ala Lys Tyr Pro | | |
| 210 | 215 | 220 | |
| Ser Met Lys Gly Ile Asn Phe Asp Arg Pro Asn Gly | Leu Lys Thr Pro | | |
| 225 | 230 | 235 | 240 |
| His Pro Phe Leu Val Ser Ser Thr Ser Glu Ala Thr | Cys Ser Ser Ala | | |
| 245 | 250 | 255 | |
| Phe Gln Arg Glu Met Pro Phe Ser | | | |
| 260 | | | |

<210> 79
<211> 136
<212> PRT
<213> Eucalyptus grandis

| | | | |
|---|-----------------|-----|----|
| <400> 79 | | | |
| Met Gly Lys Glu Lys Ile His Ile Ser Ile Val Val Ile | Gly His Val | | |
| 1 | 5 | 10 | 15 |
| Asp Ser Gly Lys Ser Thr Thr Gly His Leu Ile Tyr | Lys Leu Gly | | |
| 20 | 25 | 30 | |
| Gly Ile Asp Lys Arg Val Ile Glu Arg Phe Glu Lys | Glu Ala Ala Glu | | |
| 35 | 40 | 45 | |
| Met Asn Lys Arg Ser Phe Lys Tyr Ala Trp Val Leu | Asp Lys Leu Lys | | |
| 50 | 55 | 60 | |
| Ala Glu Arg Glu Arg Gly Ile Thr Ile Asp Ile Ala | Leu Trp Lys Phe | | |
| 65 | 70 | 75 | 80 |
| Glu Thr Thr Lys Tyr Tyr Cys Thr Val Ile Asp Ala | Pro Gly His Arg | | |
| 85 | 90 | 95 | |
| Asp Phe Ile Lys Asn Met Ile Thr Gly Thr Ser Gln | Ala Asp Cys Ala | | |
| 100 | 105 | 110 | |
| Val Leu Ile Ile Asp Ser Thr Thr Gly Gly Phe Glu | Ala Gly Ile Ser | | |
| 115 | 120 | 125 | |
| Lys Asp Gly Gln Thr Arg Glu His | | | |
| 130 | 135 | | |

<210> 80
<211> 229
<212> PRT
<213> Eucalyptus grandis

<400> 80

Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
 1 5 10 15
 Val Glu Ser Ser Asp Thr Ile Asp Asn Val Lys Ala Lys Ile Gln Asp
 20 25 30
 Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys
 35 40 45
 Gln Leu Glu Asp Gly Arg Thr Leu Ala Asp Tyr Asn Ile Gln Lys Glu
 50 55 60
 Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly Met Gln Ile Phe
 65 70 75 80
 Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Ser Ser
 85 90 95
 Asp Thr Ile Asp Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile
 100 105 110
 Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp
 115 120 125
 Gly Arg Thr Leu Ala Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His
 130 135 140
 Leu Val Leu Arg Leu Arg Gly Gly Met Gln Ile Phe Val Lys Thr Leu
 145 150 155 160
 Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Ser Ser Asp Thr Ile Asp
 165 170 175
 Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro Asp Gln
 180 185 190
 Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp Gly Arg Thr Leu
 195 200 205
 Ala Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His Leu Val Leu Arg
 210 215 220
 Leu Arg Gly Gly Phe
 225

<210> 81
 <211> 345
 <212> DNA
 <213> Eucalyptus grandis

<400> 81
 taataaatga tgaatttatt ataaaacgtat ccgtttgaga tttttgtggg tcataagggt 60
 atcaatttga aatctttgat agtaacaaaa ataatttttag gtagtttatg tttttcatga 120
 tataaacctt gaaagttaat gctactaaat tgtttatatat atattaggca aattacaacc 180
 ttaatgcAAC agttaatgac gtgatactgt tcagattata gatacaatgg ttatccttga 240
 atgaataaga agaagtccctt aaggcaagtgc ctatgagctt gcacgactgc ttttgccca 300
 tttttgttta ccagccccggg ccgtcgacca cgcgtgccct atagt 345

<210> 82
 <211> 72
 <212> DNA
 <213> Eucalyptus grandis

<400> 82
 cagtagggga cttgttcccc caagggcacg tgtcgttggt gaagctctgg cgggtggatga 60
 accgcgtggg cc 72

<210> 83
 <211> 544
 <212> DNA
 <213> Eucalyptus grandis

<400> 83

| | | | | | | |
|-------------|---------------|--------------|-------------|-------------|-------------|-----|
| actagtgatt | tcgtcgctt | cgtcttcttc | gtcttctgga | acttcgttgc | tccgagcttt | 60 |
| atcagaaccg | gcatggaaa | tgaaacccctc | gttctctc | cctcgctcct | ctcttcttc | 120 |
| tatccaggag | cgtttgtaca | ctgggagtagac | agagtttctt | gcataccga | aactaccctt | 180 |
| ggacgactgg | ccttttgcc | tcgcgcccc | tctctgagcc | ggggcgcaat | ttgtccctt | 240 |
| cccagagcga | agtgtcgatt | ttgtccttcc | acgaggctt | acctactccc | atcgcccgag | 300 |
| ccccaaagccc | aggcccaaataat | gcctgttctt | tgtggccctg | ccaacattcc | ctttgaaattt | 360 |
| aaaaaaattaa | aaaaaaactc | tctgccaggc | aaaagtaaag | attaacacca | ccaaaattta | 420 |
| taacaaattt | atcattcatt | aatttcgtt | aaattttattt | ttcaaatttac | tgagtcgaat | 480 |
| tacatgtata | aattcacgga | tgtatcggtt | cgagattttt | tcctctaatt | atcattagtg | 540 |
| | | | | | tatg | 544 |

<210> 84

<211> 515

<212> DNA

<213> Eucalyptus grandis

<400> 84

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|-----|
| gattactata | ggcacgcgt | ggtcgacggc | ccgggctgg | ctgccttcct | ttaactcccc | 60 |
| ttttttgtaa | ctttttaaaa | tgttagtttta | aatttaattt | aattactttt | tatattaattt | 120 |
| atttaccaca | tcagagacaa | aacaatgtct | tttttgtatt | ttctagtcac | gtcaacatgc | 180 |
| aaaacaacgc | cattttgcac | tcaccttgcc | ggaaaattgc | cacgtcaaca | atttggctag | 240 |
| agtggcgctt | aagtgtatcta | tttgctcca | attttggcac | ttaagtgtca | ttttcttaaa | 300 |
| tttttagcact | taaagtattt | ctctatgtca | agttttgaca | cttgggggtgt | actttgtcca | 360 |
| atcataaacc | gtataagttc | actttaaaca | aaaatggcgc | aaaaggcagtc | gtgcaagctc | 420 |
| atagcacttg | cccttaggac | ttcttcttat | tcattcaagg | ataaccattt | tatctataat | 480 |
| | ctgaacagta | tcacgtcatt | aactgttgc | ttaag | | 515 |

<210> 85

<211> 515

<212> DNA

<213> Eucalyptus grandis

<400> 85

| | | | | | | |
|-------------|---------------|--------------|-------------|-------------|-------------|-----|
| actagtgatt | tcgtcgctt | cgtcttcttc | gtcttctgga | acttcgttgc | tccgagcttt | 60 |
| atcagaaccg | gcatggaaa | tgaaacccctc | gttctctc | cctcgctcct | ctcttcttc | 120 |
| tatccaggag | cgtttgtaca | ctgggagtagac | agagtttctt | gcataccga | aactaccctt | 180 |
| ggacgactgg | ccttttgcc | tcgcgcccc | tctctgagcc | ggggcgcaat | ttgtccctt | 240 |
| cccagagcga | agtgtcgatt | ttgtccttcc | acgaggctt | acctactccc | atcgcccgag | 300 |
| ccccaaagccc | aggcccaaataat | gcctgttctt | tgtggccctg | ccaacattcc | ctttgaaattt | 360 |
| aaaaaaattaa | aaaaaaactc | tctgccaggc | aaaagtaaag | attaacacca | ccaaaattta | 420 |
| taacaaattt | atcattcatt | aatttcgtt | aaattttattt | ttcaaatttac | tgagtcgaat | 480 |
| tacatgtata | aattcacgga | tgtatcggtt | cgaga | | | 515 |

<210> 86

<211> 782

<212> DNA

<213> Eucalyptus grandis

<400> 86

| | | | | | | |
|------------|------------|------------|-------------|------------|-------------|-----|
| gagggtttca | tttccatcgc | cggttctgat | aaagctcgga | gcaacgaagt | tccagaagac | 60 |
| gaagaagacg | aagacgacga | cggcgacatg | ccttgcgttga | acatctccac | caacgtcagc | 120 |
| ctcgacggcc | tcgacaccc | cggcatttcc | tccgagacca | cctccggcgt | cgccaaagctc | 180 |
| atcggaagc | ccgaggccta | tgtgatgatt | gtgttgaagg | ggtcagtccc | catggcttt | 240 |
| ggtggactg | agcaacctgc | tgcttatggc | gagttgggtgt | caatcggcgg | tttgaacccc | 300 |
| gatgtgaaca | agaagctgag | tgctgcaatt | gcttcaatcc | tcgaaaccaa | gctgtccatc | 360 |

| | | | | | | |
|------------|-------------|------------|-------------|------------|------------|-----|
| cccaagtcgc | ggttcttcct | gaaatttat | gataccaagg | gttccttctt | tggatggaat | 420 |
| ggatccacct | tctgagctgt | tggtcgcat | ctcctcagtg | tttaccatgt | atttcgcccc | 480 |
| taaactctac | ttcttaggcct | gtaaaagtg | tctttttaa | ggtaattctg | ctattacccc | 540 |
| tcttaagtgc | atcttatcag | taaacatgga | atatcctgaa | cttgattat | atgccggctc | 600 |
| gtggctgtgg | aagcacttct | ttatgttacc | accagcttct | caggtgaata | taagcttgc | 660 |
| ccagtctgtt | ctctggggga | tttgcttgg | gggttagtggc | aatcagatgg | ttttgtca | 720 |
| tttgtcata | tttaagtagt | aatgtccac | gacagccaa | agagtagcaa | tccgggtgca | 780 |
| ct | | | | | | 782 |

<210> 87
<211> 115
<212> PRT
<213> Eucalyptus grandis

| | | | | | | |
|---|-----|-----|----|--|--|--|
| <400> 87 | | | | | | |
| Met Pro Cys Leu Asn Ile Ser Thr Asn Val Ser Leu Asp Gly Leu Asp | | | | | | |
| 1 | 5 | 10 | 15 | | | |
| Thr Ser Ala Ile Leu Ser Glu Thr Thr Ser Gly Val Ala Lys Leu Ile | | | | | | |
| 20 | 25 | 30 | | | | |
| Gly Lys Pro Glu Ala Tyr Val Met Ile Val Leu Lys Gly Ser Val Pro | | | | | | |
| 35 | 40 | 45 | | | | |
| Met Ala Phe Gly Gly Thr Glu Gln Pro Ala Ala Tyr Gly Glu Leu Val | | | | | | |
| 50 | 55 | 60 | | | | |
| Ser Ile Gly Gly Leu Asn Pro Asp Val Asn Lys Lys Leu Ser Ala Ala | | | | | | |
| 65 | 70 | 75 | 80 | | | |
| Ile Ala Ser Ile Leu Glu Thr Lys Leu Ser Ile Pro Lys Ser Arg Phe | | | | | | |
| 85 | 90 | 95 | | | | |
| Phe Leu Lys Phe Tyr Asp Thr Lys Gly Ser Phe Phe Gly Trp Asn Gly | | | | | | |
| 100 | 105 | 110 | | | | |
| Ser Thr Phe | | | | | | |
| 115 | | | | | | |

<210> 88
<211> 1521
<212> DNA
<213> Pinus radiata

| | | | | | | |
|--|--|--|--|--|--|------|
| <400> 88 | | | | | | |
| ccttcaaaga caacagagaa agttatgcaa tatgctggca gctagcttctt gggataatct | | | | | | 60 |
| atttagcgat gggttgtcg agaagttggg agcattatt gtgaagcttc acagaaaaaa | | | | | | 120 |
| tgtcgaatac atcaagcaca tgaagaagca atttgcctt taggctatct ttagcctcat | | | | | | 180 |
| ggatgttaaa ataatttctt tcttccttc cttcttctt cttacccacc aaaacacaaa | | | | | | 240 |
| ataatagttt caaattttga attttcaccc aattttatga gaggacaaaa ttacttagag | | | | | | 300 |
| tcttcactc tttatattat attctacata agtacctaaa gaggctctcc gacaatcata | | | | | | 360 |
| tgataccata aaagtaacct cgatttagaga ggcgcctctcc atacaatcat ttgatttcg | | | | | | 420 |
| agttaaatca aaattatagg ctatcccaa atcaatctat cgtccaaactg aaaatttcaa | | | | | | 480 |
| atgaatggaa ccagcacgga gttcgttagg aaatagaagt aataggtgaa aagaagcatt | | | | | | 540 |
| gtcgaatttg aaagaataacc ctacgtttc atttcaaaaa ccatggttt ttgtaaagg | | | | | | 600 |
| gattaagttt actcaagggtt gttagaagggtt gacataacaa tagcatgcag gcacaggatg | | | | | | 660 |
| catgtgtgc ccgttaattt gaccaaccta gtaagattgt caccggtttc aatgactgc | | | | | | 720 |
| ctacaagtgc atgcaaaggc catggaagtt gatggttagt gaaaagatcc ggagagacga | | | | | | 780 |
| ttattccatc atgcaatgca catgcacgc ttgctttatt actcacacga ccaacgttcc | | | | | | 840 |
| cttcatccac ggaattaatt tctctaattcg atccaataaa cgccttcga tgtcgatttc | | | | | | 900 |
| caaatgaatt aaatcggtac atgcccaccc gacttcacac atgctccctg cacgtcaac | | | | | | 960 |
| caaatccatt acgcccaccc gccccggccc tgctcacaca tcttgcacatcg cccactact | | | | | | 1020 |
| ctgatttac atgaatatca atactattcc ctccacttat aaaatggcca aacgcccgtc | | | | | | 1080 |
| ttagttctca aagcagatca gagctttca agagcttccg caaagattt ctttgcag | | | | | | 1140 |

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|------------|------|
| aatttgcgtc | agaaggatgt | ctgcatacgaa | cggactaat | ggtgtgtcg | cagtcagtc | 1200 |
| tcggccgacag | cacagacctg | ggaaaacgcac | agccatggcg | ttcgggaggg | cgttccaga | 1260 |
| tcagctggtg | atgcaggagt | tccctcgca | tggatatttc | cgcaacacaga | attgccagga | 1320 |
| ccccgtcctc | cggcagaagc | tcaaaggct | ttgcaagacg | acgacgggtga | agacgcgata | 1380 |
| cgtggtgatg | tcggatgaaa | tattggcgca | gcatcctgag | ctggcagtg | aagggtcgac | 1440 |
| caccgtccga | cagcgactcg | agatctcgaa | cgtggccgtg | accgacatgg | cggtgacgc | 1500 |
| gtggcgtgac | tgccctcaaag | a | | | | 1521 |

<210> 89
<211> 2590
<212> DNA
<213> Eucalyptus grandis

| | | | | | | |
|--------------|-------------|-------------|-------------|-------------|---------------|------|
| <400> 89 | | | | | | |
| ctgaaaactgt | cgctcgccga | tgcataccaa | aggctgaagg | tatcagaatc | taatgcagct | 60 |
| tatgtaaaag | cgcgatcaat | ttattgaccc | cgacgacctt | gactccatc | ttcacgcctc | 120 |
| agctttgtgt | tggatggtct | tgacctctct | caccctaaaa | ggtagctcaa | aagaatgaga | 180 |
| cttccgtca | tacttataaa | ccgaccacca | gcctcttca | caaccgacat | gggacaacct | 240 |
| caaataagaat | ttttaacaac | acccttgcac | gctcttcta | tccactttat | tatccatca | 300 |
| catgagcggt | ttccacgcgt | aaatcggtca | ccaccactt | tcacacggcg | gcgaaacgag | 360 |
| aaaaaggtcc | taccttgac | tcccccgcg | tcccaaattc | tcactccga | ccggttaaccg | 420 |
| agctcacaag | tttcagcett | tcatcatcat | cactcgaagg | cagagagaag | gacatacact | 480 |
| aaagacaacg | aaacagtctc | tccatcccg | catccgacac | gatccacatt | acggtacgga | 540 |
| acacatcccg | cgagcaacc | cgacgtcccc | aactcttcgc | tgtcaaaaac | cagtccggc | 600 |
| gactccgttt | cgcgccgacg | caacgtgaga | gagggagaga | gagagagaga | gtacccggcg | 660 |
| ggggatgatg | ctgtcgaa | gcgtcgccg | gcgcctctccc | gwgcaacgcg | tctctacatt | 720 |
| ccggcgcacgg | cgacggcgac | gaaggcgggg | aggggaatgc | cgcggggttt | ctgcaacgcac | 780 |
| ggaagctcac | ggcattttc | agagagagag | agagagatgg | cacgtcagag | cgccattccc | 840 |
| ccacgcgacg | ttccgccttc | cgttattcct | tccggagaa | aaagtggca | aattgcaata | 900 |
| gacaaaaaaaaa | aaaagaaaaaa | aaagacggtc | acccaaattt | tttcttataa | cacaaaaaaaaat | 960 |
| cgtacctata | taatataatct | atcactaact | tgtgcagtt | gacaaatttta | cacatttacc | 1020 |
| tgaaactgtt | tttataaacat | aaaaaattta | aacattttt | tgtgacaata | aatgttcaca | 1080 |
| caaataataa | actgggattt | ttatttcaat | tacaatttta | gaataaaatgc | gcaacataaaa | 1140 |
| tacaaaatttta | tgattttcg | tgttggcaag | aaagttttag | ataaaatgtat | cattttaggt | 1200 |
| aaagtttaga | gtttttttt | atggcttttta | accaaaatgc | acatttttagt | tccgagttct | 1260 |
| aaaagaaaaaa | ttactatttt | cctttacatt | tacttatgt | ggtgtgtat | tataaatatt | 1320 |
| aattctctt | aggatttgc | acaattctt | gagctttgt | tttgccttta | ggccattttaga | 1380 |
| attactaaaa | agttataat | ataaacattt | tttcgaccac | ggtcaccatt | catacctaacc | 1440 |
| ttctaattat | tgaaagattt | tcgcatttga | tcgaaatcca | tttactctca | taaatttgag | 1500 |
| gttttgaacg | gtatctacca | taagatcatg | gttttattaca | aaacacttat | ggcggtggc | 1560 |
| gcggacctgg | cgagaatgtg | gctactttaa | tgatgaggat | ttgagatatt | ataccacgt | 1620 |
| ccataataat | aaaggagcgc | ggcaatcata | tctttttca | tataaaggac | gatttatttt | 1680 |
| ctatgctgt | agtatttgct | cttggattt | taagatatta | gagatcaa | ctatcacca | 1740 |
| cggtgattt | aaattaaaga | agtccttgc | tcacttacaa | aaataaaat | ataaaaaaaag | 1800 |
| cttcatttgt | gcacttgc | aatttaaacat | aaatttattt | tagtagataa | tttttttatt | 1860 |
| taactaataa | tgagcactca | tttttagaaa | aatagtttca | aaatcattca | ttttctactt | 1920 |
| aaaaaaacca | attgaccaac | taaatttagta | tctctcattt | agttgggtgaa | tgaatgactc | 1980 |
| gcactcta | ccttacttgc | gcgagtcatt | ctgtgttagac | cagtctctgc | aaatctagcc | 2040 |
| atgctcatct | agcaactacc | ttcaagcgca | agtactttgt | catgttagacc | aaacgttgag | 2100 |
| caacacggaa | tgaatccaa | cgacttgg | aaacaatcaa | tccacgctac | gcaagctaat | 2160 |
| gctcacacaa | gcatcatgat | acccgaagcc | gaaaatacat | gagtcgaaag | acatcgaa | 2220 |
| ccggcgtcct | cgcgaatcat | ccgaatcgca | tgtcacgccc | ctcgacttgg | tagcttaacg | 2280 |
| agccttccag | tacctgctgt | ttaaaatgctt | tgtcaatgt | attcgaatcc | tttcaaagat | 2340 |
| cctgaaagg | cagttcaaa | aatggcgctg | accaaattggg | tttgcgttgc | tgcaatctcg | 2400 |
| ctcctactga | gccttaggatc | gagcgtctc | cagagtctc | tcctttagag | cagcggcaac | 2460 |
| tggcaagagg | ccggtgagcc | gacggatctg | gacttacgt | gaggaattgc | cggaaccctg | 2520 |
| gggtcatcaa | gtgagggcg | caccatggcc | agtcggaca | ttggcggtt | tggccaggac | 2580 |

atgcctggtg 2590

<210> 90
<211> 1172
<212> DNA
<213> Eucalyptus grandis

<400> 90

| | | | | | | | |
|-------------|-------------|-------------|------------|-------------|------------|------|------|
| actctcacta | attctttagt | tttccaattt | agccccttct | gtaattgctc | atcttc | ttta | 60 |
| ccaaattctc | taatttggcc | ggcgaagggc | tgacaaggga | ttggcatgt | caccctcacc | | 120 |
| aaagggtgcc | gaagggtccgg | tgacctcagc | tgacggccac | ctacacccaa | tctagctcac | | 180 |
| tagcagccta | agcccttcatt | caactcttagt | gaaaaggttt | gagtatttt | taataaaaaa | | 240 |
| tatttaaaaa | atatatacg | agagctcatt | acaaaaaaat | tttaaaaaaa | aatctaaaca | | 300 |
| ttacttgaac | tcaaagtgc | tttataaaga | gttttacca | aaggatctg | gtttcatcat | | 360 |
| ttgcactaca | ccccaaaaccc | aatttctaag | ttaaatcaaa | cccactgtct | aatagagata | | 420 |
| aggttaatgt | tataaacca | attccaaaat | tccgaagcac | taaatatatt | tgctgatctt | | 480 |
| ataatcgcca | attgagaggg | tctcattctc | caagggattt | tgacatatta | gtaattgata | | 540 |
| gggtctcattc | cgttaggactc | cgactcagcc | gcccacgtg | actggatcgc | tgaacggcgc | | 600 |
| ggaaccagag | gagcgtgatt | acctaattt | ttctcctacc | ttggccttga | gattgaattt | | 660 |
| cagaaaaaga | aaaagaaaaa | ggaacaactt | cgccgactgt | tctataaaaat | gcatgcgcc | | 720 |
| ccccgacccc | caccacgc | tcacatccat | ccagcctcca | cgacagacgc | ataaacacaa | | 780 |
| cacacgtcgg | ttagagagag | agagagagag | agagagagag | agagagagat | gtttggacag | | 840 |
| ttgtcgcacg | agacggaaat | gaaggtggga | gcagggaaag | catgggagct | gtatggcacg | | 900 |
| ctcaagctgg | tcctgctggc | caagcaggaa | ttctctaata | ccatctgcga | cgtcttggaa | | 960 |
| ggtatggcg | gcgttggcac | cgtcatcaag | ctcaattttt | gaagtttatac | ctatacagag | | 1020 |
| aagtacacaa | aggtggacca | cgagcgcgc | gtgaaagaaa | cggaggcgat | cgaaggtggg | | 1080 |
| ttcctggaca | tgggtctcg | ctgtatcgat | tgcgattcga | agtgataggc | aaggacgagg | | 1140 |
| aggagtcgtt | ccgttattaa | agccccccccc | cc | | | | 1172 |

<210> 91
<211> 446
<212> DNA
<213> Eucalyptus grandis

<400> 91

| | | | | | | |
|------------|------------|-------------|------------|------------|------------|-----|
| gggtgaaaac | aattaatgag | atcatttgaa | ttaaggaaag | tggaaaggcg | gtttctgat | 60 |
| tggtacactg | aaacaacagg | aaggtggtg | aggccgcaat | gatggattt | atccacttta | 120 |
| atcattttat | gaaatcgata | caactaacctt | tgtttctct | aaacccaaag | gcattaatcc | 180 |
| ctgtcctcct | cactcgatct | cgaaggccag | aaggggagg | ccgagcctct | tgctttttt | 240 |
| cgtgtataaa | agggcctccc | ccattcctca | ttttcacca | tcctccgttc | gttcgttccc | 300 |
| ttcccttcc | attgtgcgt | ttaagccctc | caattttctt | ttggcgtccc | gttttgggg | 360 |
| ctcccttcaa | gatctcctct | tcatttcggg | atttcctgcc | ttcgcgcgc | catttgaagt | 420 |
| tcttttctg | agagaagaat | ttagac | | | | 446 |

<210> 92
<211> 2119
<212> DNA
<213> Pinus radiata

<400> 92

| | | | | | | |
|-------------|------------|------------|------------|-------------|-------------|-----|
| atcttattcc | cacccacat | caataaattt | tatacgattt | taacatctt | aaaattaaaa | 60 |
| gaatcaagaa | ggcatccagg | tgataaagcc | acgtccaata | taaaatctcc | tcgggtggatc | 120 |
| ctttcaatcc | agctacccaa | tgccggaaa | ataacgctga | ttggacttgg | ctacactgt | 180 |
| atcacaaatt | cccttccgtt | tagatttcaa | ctcggtgacc | tacgagtatt | ttatcgattt | 240 |
| aaaattatac | aaaaaattgt | ggaatgtttt | acataagcaa | aacttaata | atgtaaatag | 300 |
| cgtatgtct | ttacttgtac | ctaaaaattt | cttccaaatt | aaacccaaata | tcaaatccta | 360 |
| gattgtatgag | ttccagtgga | gtctgccatt | ttatttcttt | ctctctttca | ttctttgcaa | 420 |

| | | | | | | |
|-------------|------------|-------------|------------|------------|-------------|------|
| cggaaaggaga | aaatccttaa | cacaattcga | aaacgataat | gattctggca | aaagagaaaa | 480 |
| aaaacgtcaa | gattagacac | ttgtttgtt | ttaaatgagc | aatcacatgt | gaatagagag | 540 |
| ggtttatgg | gcctggttt | gtgtcataa | tttcttatga | aagcgatgtg | cctggagcgt | 600 |
| tgaagctcat | agaacattgc | aacaagagat | cgagagtgtg | ggtagaaaaa | ccgcaacaat | 660 |
| agtttgcgtc | gtgttttct | atattcagag | gtgttggtg | gttaatatct | ctggatttat | 720 |
| ctcgaatgcg | tcactttac | agacacagaa | gctcagcgg | aaccctcaac | gcttaaggg | 780 |
| ccataaattt | gctcagttt | aaaaattgtt | tgatttccc | ggtttgaata | ttttctttt | 840 |
| gttatcgaa | gtggctctgc | cttatgagta | tcatgttctt | ggtttgtgt | tgggcgctta | 900 |
| ttgattcagg | tatgtattat | ttctagtcc | ttttatcagc | ataggtggaa | tgttctgtat | 960 |
| tttatatttt | ggggccatac | acatgaaacc | gttgcatta | ccatgcctt | tagataatgt | 1020 |
| ctctctgaat | ttgtttttat | aggctttgc | ctcctacgca | gattttaaa | ggaaaataca | 1080 |
| aagatattt | gccaattttt | gttgggtgaa | ccttgaattt | ctaaaaaatt | taatggattc | 1140 |
| gttttctaaa | ttcctgattc | gtcaaaaggct | gaaggcgcg | atagtaatag | aaaatggacg | 1200 |
| agagtttatac | ttttcatggc | tggacacaca | gaatttgg | aggggattct | ccattctgg | 1260 |
| ttatccaccg | ttagttctct | ctgtactcca | cccttagttc | tctttgtact | cgagaccttt | 1320 |
| aatgattaac | cctgcttatg | ctgtcagttac | tgaactca | tccagagccc | caaaaatctc | 1380 |
| tcccaagttt | gccttatttc | ttaaaaataat | tcacaagtag | aaaatgagat | ttttgcaatt | 1440 |
| ttgtaactaa | cattcccg | tctcctctgt | atgtttcac | cccttaatgt | aattgaaatt | 1500 |
| tgcacccggg | ttagattcaa | agcggagaat | aacatcgaaa | ccttggctca | gacagagatt | 1560 |
| tttcacaaat | aacaggttgc | aaggtatgtg | tagacatctg | ggtagttgt | gaataaaagac | 1620 |
| ggagcccatt | aggtggatcc | aatcgaagaa | ctcagatgg | aaaacagata | aaaattatcg | 1680 |
| ggtgacccctt | cctccacatg | ttaattat | atcaagtgc | gcaatcctt | atgtaaaaca | 1740 |
| tttagtaaag | tttcgcccc | gcacttctt | tagcattct | gtgggctctg | ttgttgtgt | 1800 |
| tgqaagtaact | cctttaaggg | aggtatctga | atatttgc | cagaagtca | taaaacaagt | 1860 |
| ggttgactgt | ctgtttgtac | aagatgttac | tggcatacct | gtgggcttga | tagagacttc | 1920 |
| caggcgcatt | gtgcataaa | atcatttgg | gatgcagaag | ctagccggag | tagagtctat | 1980 |
| agagcccact | gaagcaattt | gtgtaatcaa | gcttcctagc | agcttctaca | acttggaaatc | 2040 |
| tcttgaatc | actctagttc | ccagatatgg | tgctcgctc | cacatcgct | gcttgtactt | 2100 |
| gatggcattc | aggatcctg | | | | | 2119 |

<210> 93
<211> 2571
<212> DNA
<213> Eucalyptus grandis

| | | | | | | |
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| aaggtaactg | gttcagcaga | gcgcagatac | caaatacttg | ttcttctagt | gtagccgtag | 60 |
| ttaggccacc | acttcaagaa | ctctgttagca | ccgcctacat | acctcgctct | gctaattctg | 120 |
| ttaccagtgg | ctgctgccag | tggcataag | tcgtgtctt | ccgggttgg | ctcaagacga | 180 |
| tagttaccgg | ataaggcgca | gcgggtgg | tgaacgggg | gttcgtgcac | acagcccgac | 240 |
| ttggagcgaa | cgacctacac | cgaactgaga | tacctacagc | gtgagctatg | agaaagcgcc | 300 |
| acgcttcccg | aaggagaaaa | ggcgacagg | tatccgtaa | gcggcagggt | cggAACAGGA | 360 |
| gagcgcacga | gggagcttcc | agggggaaac | gcctggtata | tttatagttcc | tgtcggttt | 420 |
| cgccacctct | gacttgcgc | tcgattttt | tgatgtcg | caggggggcg | gacccatgg | 480 |
| aaaaacgcac | gcaacgcggc | cttttacgg | ttcctggct | tttgctggcc | ttttgctcac | 540 |
| atgttcttc | ctgcgttatac | ccctgattct | gtggataacc | gtattaccgc | ctttgagtga | 600 |
| gctgataccg | ctcgccgcag | ccgaacgacc | gagcgcagcg | agtcagttag | cgaggaaagcg | 660 |
| gaagagcgcc | caatacgc | accgccttc | cccgccgtt | ggccgatcca | ttaatgcagc | 720 |
| tggcacgaca | ggtttccg | ctggaaagcg | ggcagttagc | gcaacgcaat | taatgtgagt | 780 |
| tagtcactc | attaggcacc | ccaggctt | cactttatgc | ttccggctcg | tatgttgt | 840 |
| ggaatttgta | gcggataaca | atttcacaca | ggaaacagct | atgaccatga | ttacgccaag | 900 |
| ctattnaggt | gacactata | aatactcaag | ctatgcattc | aacgcgttgg | gagctctccc | 960 |
| atatggtcga | cctgcaggcg | gccgcgaatt | cactagtgt | tgccccggc | tggctggag | 1020 |
| tggccaccat | cggcataatg | actaggaacc | cggaacatca | actgtggaa | gaaaagccga | 1080 |
| cattcctcat | caagagctcc | tctcactct | tccccactac | tactatagg | cacgcgtgt | 1140 |
| cgacggcccg | ggctggctg | ctgtcatatt | tgtatatgag | gctcctatgt | tgcttgctat | 1200 |
| gtgacccct | tcatgtatgc | tgtgaagaga | gtgttagcagt | aacatggcca | tctgcgaaat | 1260 |

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| atggattcac | cttaaaatct | gatgatttc | agaaaacgag | gaaggtgctt | gccgagaaga | 1320 |
| ttgcacagct | caattcagct | atacatgatg | tatcctctga | gctccgaact | gaagaatcat | 1380 |
| cagatgagat | tgctgttgc | cctgatgaaa | ttgaagctgc | tgtttgatgg | cccaaacctc | 1440 |
| ccaggcctac | gatcatggc | atcttctgtt | ttggtgcaat | tggctctacc | tttttgttgg | 1500 |
| cctccatata | acagaataat | ggttcatatt | gtaaaatctt | ctgttttattt | ctaaagacca | 1560 |
| atgcactcag | tttctttga | tatgattgtc | tcgattgagg | aagtgcacca | ttcgttgtat | 1620 |
| gattatgcag | aataccattt | aactcagcag | actttgtacc | gtatcatcg | agctttccc | 1680 |
| ttcttgttgc | tgcataaatac | tagtcctca | ttgaaggtga | tcgcccgtac | agtctggata | 1740 |
| gtgtgtgcca | ttagatggca | ctacgattag | tgtgggtgac | atggtgtcaa | cttggaaagcc | 1800 |
| aatttgtgac | gatggtaactt | aatgttaagat | tggcagatgg | tgagaacgag | attttgtcc | 1860 |
| agaatggcaa | agcaaggcta | agttgttagcg | aatcaaatga | tctacgaacc | atcctagctg | 1920 |
| gctgtgtgac | cacacactga | agttctattt | aactaagcca | gttatggatg | atatgggagg | 1980 |
| agaaaattga | gaaatccatc | agatggatgt | ttggccgtgt | tgggctttt | tcgcaggccg | 2040 |
| atacttcgaa | ttcaggcgta | tttttattcc | tgactgccc | ctctcccgga | aaggaaaggc | 2100 |
| ggatattatt | ctctgaacga | tttccaccat | caactccaca | tcgatctcca | agccagaaat | 2160 |
| atacacaccc | caattttctt | ttaaatatat | gggacatata | tggtgttaggc | tctcgccat | 2220 |
| gttaaacacat | aagctctc | aacaaaaatc | tggctcggtc | tttaaccga | gaagttcacg | 2280 |
| agtcattgaa | ggagtggcct | ttaggggagg | gagagagatg | gattgggtgt | taaaatcagt | 2340 |
| ctgtggctca | catttatacc | gtggagatcc | cccaacagca | accttacccc | attatatac | 2400 |
| ccacacaacac | catattcacc | actcgccct | tctaattggc | ttccaaccat | aattcacaga | 2460 |
| cacacatgta | gtgaccaatg | agaaaaggaag | aaaatatacg | gtttcgaaa | gttagtgcgg | 2520 |
| tataaataac | ctgggaaaag | caagccgctt | gagcttagt | ttcagtcagc | c | 2571 |

<210> 94
<211> 1406
<212> DNA
<213> Pinus radiata

| | | | | | | |
|-------------|-------------|------------|-------------|------------|--------------|------|
| <400> 94 | | | | | | |
| aaagaggcgg | aggaattgtc | tagatggtca | aaagtgaccg | gaatctaagc | aaaaaaatttc | 60 |
| aaaaaaatgtt | gtaaaggtag | cgtttgaatt | gtgttttga | tggtgaaat | ggattcaacg | 120 |
| ccatcaaaaa | cgtctaagac | acctaaaatt | ttgaatttta | acaactat | tttggattt | 180 |
| caaaaaatcct | tgccggattt | tctctaaact | ccttcaccc | acgaaaaga | tatataattt | 240 |
| tttgtgtat | gttgtgcatt | ataagttga | tagtgaagta | atgatata | tcctttatgt | 300 |
| gatggatgt | tgaataatga | atataaaaa | tgaataaaat | aatgatggg | taatgaat | 360 |
| attatatgaa | ataaaatataa | agtaaaatgc | tatTTTAA | tggtgttaat | gatgaattag | 420 |
| tatcatcctt | aaataattt | ttagtgaatt | ataaaaatga | ttagtttagc | tggcgttta | 480 |
| ataaaattgtt | agtgaattat | tatattata | tatTTCTTA | ttagaaagtt | tttttttgt | 540 |
| aaaagtttc | cttgaacttc | accatattt | aattatcaat | aatttatatt | taataaatga | 600 |
| tatataaac | ttcttagcaga | atgacacg | acttgtat | ttttcattt | tttaaccat | 660 |
| gaaaaccgat | taggtattt | caaattaggg | cattggcatt | caaataattc | tcagatgaaa | 720 |
| gattctctt | aacaattaca | aatgattt | ttttccatg | agtgttgc | gttcaacgg | 780 |
| tctgcccagt | ctgtgagaga | gcatagagaa | ccctccctgc | ccaatttgtt | agagcataga | 840 |
| gaaccctact | gcatgagtag | taagaaaaat | attcggttctc | aattcgccaa | agaccaccc | 900 |
| gaatggatga | cttcaacgac | aatctcatga | tagtggatgt | atcagcacca | gttcacctat | 960 |
| atattttatc | taggttttag | tttgcattt | tcaatcctt | ggtgcact | gtaattctt | 1020 |
| cctagtatca | tatattccta | atactgtttt | gtcttttaat | ccatggctac | catcagaaca | 1080 |
| agctcaaagc | agaaatcggg | agcatcagcc | atcctcttgc | ttatcgct | tgcagggtt | 1140 |
| gtaaatgcgt | gcaacgtgt | gggtatttgg | ccaatgtgc | acactgtgtt | gtcgagtctt | 1200 |
| ctgaggcttc | tgccatgcag | gacggctgtt | gatccctaa | tggccccc | tccacttcca | 1260 |
| agctgctgca | acgcgggttga | gtcagctggg | cttcaatgcc | tctgtctgt | cgtaaacggc | 1320 |
| cctcccttcc | caggggtcga | ccgcggcctc | gcaatgcagc | tgcctgcca | atgccccatctc | 1380 |
| acccttcctc | cctgttaacag | tttagt | | | | 1406 |

<210> 95
<211> 2546

<212> DNA
<213> Pinus radiata

<400> 95

| | |
|---|------|
| ctggtagaac aagcagctca aggagcacca aggcacgagc ccactttgca tggtagac | 60 |
| taacgaattt tacattagaa taaaatatgt cgacaatatac gaggagatct tctccaaat | 120 |
| ccaaactcatt aatctctatt atgcacaaac gagtgatgt tcgagactca tctgccaaca | 180 |
| agccatcaac atcaagaagg gaacggaata gagccaaagg gaaccctaga gaccctcatc | 240 |
| cacataataa tgaaatattc cacgtgtgtt ttccaaaatt tgaaaatttc atgtatTTT | 300 |
| tgggtgattt gttgtggctt ggTTTTTCC aaattcaatc tagttcaagt tttggagtc | 360 |
| gaccagttgg gtaaccagtc taattctggt aacattgcatt tgacttgcatt ctcaataaaa | 420 |
| gcatatagga tagaattatc ttctgtctt atggTTCCA tgagaaccaa ctgctataact | 480 |
| atgaaaaata tcaatgttcc acaatatttt tgggacaagg gaacacaaga ttgagtcaac | 540 |
| agttcaggac cccagaaaaa ttattcctga gttcgagat tattttccta aaagtgaaca | 600 |
| attcaagacc ctagccaaat cattcccaag tccaagttt gtgacactgc gactaacaag | 660 |
| gcaagttgga agaaaccatc aatcaatctc ctatgttac acagtccttga aagaagttc | 720 |
| aagaagatta acaccagaag aggtcatgtt gactgtttt atccaattt ctctgtctt | 780 |
| caccaacaga aatagccaag atggTTGTC ccattcccta atctaatttta ttatatgaat | 840 |
| ttctctttat ttttctacat ataaaaaaaca aaaacttttca ttgatggtca aacagaaaag | 900 |
| gcagttcgat tggattttaa catccaaata cctcccacag attgagaagg ccaagccccca | 960 |
| atccaacagt ccatgatata atatttattt aatcacactc aagataatgc aatgaaggtg | 1020 |
| caccacgcta ttagattctg cacagaactc agatgactgt aattatcaac tttaaccagg | 1080 |
| agtaatttaa aaactcaattt gtgcttcagc tatgtggaaa aactttggca ctggaaatgg | 1140 |
| tataaatgtt gttgaataag caaacatttt tcaagactg aattcaaaatg caagtcaaaag | 1200 |
| gaacatctt cttgggtgtt acaggaaatc tgaagtacaa aattagcgaa aaaacaggag | 1260 |
| aaagagagta gtcattacat gttataacat taccatatac gattttgttta tacttcttga | 1320 |
| tatttcaact tcccgactga tgaaatgtat gccactacag aacaggtcag tcatgtatgt | 1380 |
| gagcaatttgc ccaaacttagg tccaaagggtt caaccagtgc agacaacgcgt gtaactgaaa | 1440 |
| caaatttgc ggacaattaa aaattctta ccaggatagt tgtaccagta ggtgccctt | 1500 |
| tcaaaccatg attttaaaaca caagggtggc ttaccacttgc accaaatcat ttaataacca | 1560 |
| accctcgaa catatcaaga aagaaaacat ctgcataataa gtaaatttgcgaa agatgatatt | 1620 |
| taagaggcac tgccttaat ttccatttgc gacaaatcca cattgttgc taagcataaa | 1680 |
| accttgcgtt agagcaagtt tagggacca tcaaataattt ctacataact tacaatagt | 1740 |
| tgtttataaa gctaataaaa tgcttcttatt taaatataa gcaacctaca caagaaaattc | 1800 |
| actaggacag caatcacttgc gccaatgtgc ttaccaatattt aaccataactt gaagagcata | 1860 |
| cataaaatcac aaataatgtat tcaatttagaa atatcttataa gataaactat tattcaatgt | 1920 |
| acatgttaca aagaacctca cctgtccggc tttgaggagc aagtagacaa ctaaaagcgg | 1980 |
| aggttacatc ctgaactgaa ctgtttctcc tctgttccaa gaacttgcatt tgatTTTGA | 2040 |
| gtaacttcac tcgtgccgaa ttccggacac gaaaacactt tgattgttcc cgccgggtgg | 2100 |
| ttttacttgc tctggatata gttttccgc cgTTTTGGA agatttatca gaatggccaa | 2160 |
| aattcaggtt tcaaaccgggaa ggcgtcggtt ggtggccggc atgatatttta tggtggcggt | 2220 |
| ggccatgcaa aaccatcacg tcgcccggc aagtgcgtac tgcgcaccac cgccggatgt | 2280 |
| ctgagccctt ggcctcggc ggtggggaaac aacccgcaga ccccaactccc gaatgtgt | 2340 |
| ctgttctcca gaccggccat gtcgactgca tctgcggccct cgtcgaatca accataaaat | 2400 |
| tgccttccga atgtggtctt gacacccccc agtgcaccaag cgactagatt ctcaagaccg | 2460 |
| tgactgagtg ttggTTTCAAG agccagtaaa cattcatttgc gtaataaaat gagtgtatgg | 2520 |
| agctttaata ttggaaaatgc ttccat | 2546 |

<210> 96
<211> 4726
<212> DNA
<213> Pinus radiata

<400> 96

| | |
|---|-----|
| gattactata gggcacgcgt ggtcgacggc cctggctggc cctaggacac cgtaataat | 60 |
| aacctcgaca tggcttacaa agctttgcatt tgcatttca ttgggcttac aatggtgcgt | 120 |
| ccaaaaatgc aaaagtacat atgtaccctt gttgaaatgc gcagtaatgc gcttgcacaa | 180 |

| | | | | | | |
|-------------|-------------|--------------|---------------|-------------|-------------|------|
| tagtgaattg | ctacaaaatt | atgaatgcct | ttcttgctt | aatgtggc | taaggagaag | 240 |
| tggatttac | atttgacttg | caaatactaa | gacttgtcta | gagctaagcc | tccagaggag | 300 |
| gaaccatctt | acatagtctt | gagtcttagag | cggagaagat | agccaaattt | gaaaggaaac | 360 |
| tttatttat | ggggagaagg | caaacaactt | gagggggaaag | gatgatcaat | aagttaggta | 420 |
| agggaatcca | caacagaggg | caactaggaa | atgggggtgt | tagaattggc | aactaggccc | 480 |
| aaattccacc | ttgggatagc | tctctggatg | gagatgatga | ttgcattaga | ttcctcttt | 540 |
| cgagaggacc | aagattgata | taaagatcat | ctcatttgg | caagcatagg | tatgattttg | 600 |
| aatttatacc | cactcatgca | caatttttt | aggtccgcca | catcatcatg | taggtcatg | 660 |
| aagcccaacg | gacatgactc | ttccccccta | tcgtttgt | taaataacaag | tgtccccc | 720 |
| cctcatttgg | catcttcata | tcttacagat | tctctttct | cccttcattt | gttcttgcat | 780 |
| cattgggcat | tctctctctc | ccacgtgtgg | cacaaggagg | atgaaattac | aagaccgaaa | 840 |
| ataatagaaa | ttttgcaatt | tgaccagcat | tgaccatgac | tttccaagca | tcattcgact | 900 |
| tcaatttttt | tggttattt | ttgtctcaac | aagccgcata | tttggcaaa | aaaatcgagg | 960 |
| cattctggc | acttcgacta | caaaccaaaa | ttgttaggtt | actgcaaatt | tcaaatagtt | 1020 |
| tgactattga | cattgtcact | gtttcgatt | gactttgacc | tcctaatttag | gccgagttt | 1080 |
| actagggggag | gctgatttgt | tttaaggaca | tttgattgt | gctttgacta | gcattgactt | 1140 |
| ttatagttaa | ggttgaagtt | tgactacagt | tgactgcata | aatttgcaga | gatgtttga | 1200 |
| cttgaattt | ggcaagtcaa | tttgaatttt | gtactatctc | tctattttga | acatttgata | 1260 |
| taataataag | aagattcgat | caaagggtt | tccccgcatt | gggtttttc | cctgcacatcc | 1320 |
| gccaaatctg | gtgttctctt | gtcttgcctt | gtcttatgca | ttttgtttca | ttttctatct | 1380 |
| actttactg | tcaatgtgat | tattgtcagt | gttattggaa | attggaaatt | gtgattggc | 1440 |
| tgctaaggaa | cattgaagta | aattgtgcta | aacaaagaac | ataccattt | taacaaaat | 1500 |
| taacaaaggg | gaaacacaga | ggaatgggtt | caattgcaag | attgtcattt | atttgactt | 1560 |
| caagtggaga | aggtcgcgt | gaggtcgca | ggggagagga | ataggagaga | aggccctatc | 1620 |
| aacttgttca | aggagagggg | caatacaagg | aatggaggaa | ccctcaccaa | tgaataatcc | 1680 |
| atgcacaaaa | gtaatagaat | gaacaaactt | accacacgga | agagcttcct | tggtccaaa | 1740 |
| agccttcct | ccgagacctg | aatcctccaa | tgcatcaaaa | ttattgatca | ttgaatcaac | 1800 |
| cacgatttagg | gccacttcct | tgctaataaa | agcaattagt | gtagcaaatt | ctaaagctaa | 1860 |
| cttcaaagaa | accttagctt | tccaaaaaac | aattgaaggg | aggcaatgaa | gatggcttat | 1920 |
| cacactaagc | ctaaacatgc | cccaccctat | ggcatctaaa | acatctaaa | gggattcact | 1980 |
| agtaatcgat | cttttgcact | tatgaaaaat | tcccatgaa | caattcgatc | tcttccaaaa | 2040 |
| agccatctat | gagggtcaacc | tcaacctggc | tctaattgtt | attgagctt | taatcctagc | 2100 |
| cctactccaa | tcttaagaac | caaccaattt | tatttccat | tgattcaagg | accctacac | 2160 |
| tccaaaagaa | gcaagggaaag | gccaaggaga | atggccaaa | cttgagcaga | gaataaggat | 2220 |
| tctctgttag | ggtcgaaact | aacatccat | tcacgtaaaa | tcaaaccaga | gagacctaa | 2280 |
| ctccaactct | tcttaatgat | gaagcacaaa | tatttttgc | agtgaaattt | gaaaccaaga | 2340 |
| aaacctctca | ctaataatatg | gaagaggggc | aatattcaac | cattggtacc | caaatgcct | 2400 |
| caagacactt | accaaggggag | ccaaacccaaac | aatcttacca | caaaaaccac | caacagtgtt | 2460 |
| tttaccctaca | agctcttgg | tggaaatccag | gataatgtct | tcaccaacaa | ccatcttatg | 2520 |
| tctatccttg | caagcacaaa | tgatttgc | tttagatttgc | gagtgcataa | atacaggggg | 2580 |
| gtatccagg | ggggggagggg | gtttgttgc | accccagact | caccaaggca | tgaagacaaa | 2640 |
| atgaggagag | agggatctag | attggggat | gcaagttgt | gaagcatgaa | aaggcaatcc | 2700 |
| atcaccctgc | atggcatatt | tacgaagggtt | gttcagagga | atgagaacta | atggatgaac | 2760 |
| aacagcttgt | agaacaagca | gctcaaggag | cgccaaaggca | cgagcccact | ttgcatgtt | 2820 |
| tagactaacg | aattttacat | tagaataaaa | tatgtcgaca | atatcgagga | gatcttctcc | 2880 |
| aaaatccaaac | tcattaatct | ctattatgca | caaacagatg | atgtgtcgag | actcatctgc | 2940 |
| caacaagcca | tcaacatcaa | gaagggaaacg | gaatagagcc | aaagggaaacc | ctagagaccc | 3000 |
| tcatccacat | aataatgaaa | tattccacgt | gtgttttca | aaatttggaa | atttcatgt | 3060 |
| ttttttgggtt | gattgttgt | gtctggttt | ttccaaattt | aatctgtt | aagttttgg | 3120 |
| agtcgaccag | ttgggttaacc | agtctaattt | tggttaacatt | gcattgtact | tgatctcaat | 3180 |
| aaaagcatat | aggatagaat | tatcttctgt | cttgcatttttgc | gccatgagaa | ccaaactgcta | 3240 |
| tactatgaaa | aatatcaatg | ttccacaata | tttttggac | aaggaaacac | aagattgagt | 3300 |
| caacagttca | ggaccccaaga | aaaattattt | ctgagtttgc | agattattt | cctaaaagt | 3360 |
| aacaattcaa | gaccctagcc | aaatcattcc | caagttcaag | ttatgtgaca | ctgcactaa | 3420 |
| caaggcaagt | tggaagaaac | catcaatcaa | tctccttagtt | aatgacagtc | tttgtaagaa | 3480 |
| gttcaagaag | attaacaccca | gaagaggtca | tgctgactgc | ttttatccaa | ttctctctgc | 3540 |

| | | | | | | |
|-------------|--------------|-------------|------------|-------------|------------|------|
| tcttcaccaa | cagaaatagc | caagatggtt | gtaccattc | cctaattctaa | tttatttat | 3600 |
| gaatttctct | ttatTTTCT | acatataaaa | aacaaaaact | tttcttgatg | gtgaaacaga | 3660 |
| aaaggcagtt | cgattggatt | taaacatcca | aataccccc | acagatttag | aaggccaagc | 3720 |
| cccaatccaa | cagtccatga | tataatattt | attcaatcac | actcaagata | atgcaatgaa | 3780 |
| ggtgccaccac | gctatttagat | tctgcacaga | actcagatga | ctgttaattat | caactttAAC | 3840 |
| caggagtaat | ttaaaaactc | aattgtgctt | cagctatgt | aaaaaacttt | ggcactggaa | 3900 |
| atggtataaa | tgttgtgaa | taagcaaaca | ttttagaaca | ttttcaagc | actgaattca | 3960 |
| aagtcaagtc | aaaggaacat | cttacttggg | ctgtacagga | aatctgaagt | acaaaattag | 4020 |
| tgaaaaaaca | ggagaaaagag | agtagtcatt | acatgttata | acattaccat | ataggatttt | 4080 |
| gtaatacttc | ttgatatttc | aacttcccga | ctgatgaaat | gtataccact | acagaacagg | 4140 |
| tcagtcatgt | atgtgagcaa | ttagccaaac | taggtctaa | ggttcaacca | gtgcagacaa | 4200 |
| cgctgttaact | gaaacaattt | tgtggacaa | ttaaaaattt | tctaccagga | tagttgtcc | 4260 |
| agtaggtgcc | cttttcaaacc | catgattaa | aacacaagg | tggcttacca | cttgaccaaa | 4320 |
| tcatttaata | accaaccct | cgaacatatac | aagaaagaaa | acatctgcat | ataagtaaat | 4380 |
| tgaaagatga | tatTTAAGAG | gcactgcctt | aaattttcca | tttggcaaat | ccacattgct | 4440 |
| tgataagcat | aaaaccttgg | ttaagagcaa | gtttagggaa | ccatcaaata | tttctacata | 4500 |
| cttacaata | gtgtgtttat | aaagctaatac | aatgttctt | atttaataat | atagcaacct | 4560 |
| acacaagaaa | ttcaacttagga | cagcaatcac | ttggccaatg | tgattaccaa | tataaccata | 4620 |
| cttgaagagc | atacataaaat | cacaataat | gattcaatta | gaaatatctt | aaagataaac | 4680 |
| tattattcaa | tgtacatgtt | acaaagaacc | tcacctgtcc | gccttt | | 4726 |

<210> 97
<211> 635
<212> DNA
<213> Pinus radiata

| | | | | | | |
|-------------|------------|------------|-------------|-------------|-------------|-----|
| <400> 97 | | | | | | |
| aaattctatg | aaaaaaatcc | aatcatatta | aaagtccaaat | tgattagcaa | ttttatgaga | 60 |
| aaaatccaaat | tatgttaaaa | gtcactgagt | gtggccgaaa | ttgtgaccga | aattgaatgc | 120 |
| aataaaccgag | ggttttcaa | accaaggta | agcctctcat | cattggggtg | tgtatgaaaa | 180 |
| tgtatggc | atcgataacc | ttttattaca | acttcacgaa | aattgcctct | attcaatggg | 240 |
| tgtggatgaa | aatgtaaatg | cgcatcgata | atggaaagcg | atatgcagca | aaatcaataa | 300 |
| acctgacttc | ccatgtgagt | gatgattga | tcgtacaact | gatgggtgtga | agttactttc | 360 |
| agcttcacct | tcgggcataa | tcagggaaat | agggccaagt | ttgcttagta | tcactctaatt | 420 |
| ccccaaacacc | gtgattacta | tcttcatcaa | caatggccac | cttcgtcatt | actttaactg | 480 |
| gtggataca | gctactttac | aactgtaaat | ttgttggggc | agcctatcct | cagccataac | 540 |
| atactaatta | ttgcagctcg | attaggtatc | tgctgtgaga | atagctgtgt | atctctgcgc | 600 |
| tgggtgcagg | atccaagttc | ctctcagagc | cctcc | | | 635 |

<210> 98
<211> 468
<212> DNA
<213> Pinus radiata

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|-----|
| <400> 98 | | | | | | |
| ctggtaaatt | gagattccaa | attattgtat | cgaagcttcc | tcgtggctgg | tcgggtgc | 60 |
| tggcatccaa | accctaaatg | aaaaagaaaa | aggtgtccgg | acggattttt | tttagtatttt | 120 |
| tttcttattt | tttttatgaa | ccgtcggtt | cgagatcgga | cggcgatccg | aaactgcaag | 180 |
| cgtcgccgt | cggatgcagc | atcggacggc | aaagaaggaa | ccctaaaacg | cattgcaacg | 240 |
| tgcttggtgg | gtggagggtc | tatggccagt | atatgttata | aacaagggag | aggaagttagt | 300 |
| cctcttcatc | tagtgcagat | ctctctgtt | ttctacgccc | ctgcgaagct | gttctgtgg | 360 |
| gtttctgatt | ctccagactc | aggcagtcgt | ttttgttata | gaatttagtt | catcatggga | 420 |
| aaggagaaaa | cccatatcaa | cattgtggtt | attggccatg | tcgactcc | | 468 |

<210> 99
<211> 222
<212> DNA

<213> Pinus radiata

<400> 99

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| atccaaaccc | taaatgaaaa | agaaaaaagg | gtccggacgg | attttttag | tatTTTTT | 60 |
| tcttatttt | tttttatgaa | ccgtcggatt | cgagatcgga | cggcgatccg | aaactgcaag | 120 |
| cgtcggccgt | cggatgcagc | atcggacggc | aaagaaggaa | ccctaaaacg | cattgcaacg | 180 |
| tgcttggtgg | gtggagggtc | tatggccaga | tatgttgtaa | tc | | 222 |

<210> 100

<211> 597

<212> DNA

<213> Pinus radiata

<400> 100

| | | | | | | |
|------------|-------------|-------------|------------|-------------|------------|-----|
| aaatgaggca | gctaactatt | tatTTGGTTT | tggcttca | gacttgttcc | ttagtgtatt | 60 |
| aatgaacaat | ctcttttagac | tcagagatgg | tgagaaagat | tctatgagaa | atattcttgc | 120 |
| tattgctcg | actcatatcc | ccccaaagagt | ggatccagct | ctaatacgctc | caaatcgatt | 180 |
| agatagatcg | atcaatattc | gaatgcttgc | tatcccacaa | cgacaaagg | aatttccat | 240 |
| tcttttatgt | agcaaaggat | tatactcggt | aaaatgtccc | gatgaatttgc | gatctataac | 300 |
| catagattat | gatgcacgag | ctctattagc | tcaggcctct | ctgctgctcc | ttggattgca | 360 |
| atctcattct | ctgatttgcc | gtgctgttt | ctctgctcac | ttcagcccag | atggagacct | 420 |
| tcttggtcac | atcgaggatct | gttaaatgagg | gacaccaga | caaactctgt | gaccagattt | 480 |
| ctgatgcagt | gttggatgca | tgccctcaccc | aggaccccga | cagcaaggta | gcatgcgaga | 540 |
| cttgcactaa | aacgaacatg | gtcatggttt | ttggtgaaat | caccaccaag | gccgatg | 597 |

<210> 101

<211> 669

<212> DNA

<213> Pinus radiata

<400> 101

| | | | | | | |
|--------------|-------------|-------------|--------------|-------------|------------|-----|
| cctggaaatg | ctatattaac | tcaacaaagg | atTTTCAGCC | aatcacaatt | tgacaggTTT | 60 |
| gaaatgaaag | attacaggca | tttccaatgg | aacagaatat | aattacttta | ttccctcaaa | 120 |
| gtatcgata | aaataaaatct | tttgctccac | acactttgga | aaatacattt | tcaacaatgc | 180 |
| accgacaaac | ttttcttacc | acgttatgga | accatacaag | ttaaattttaa | acacgaatta | 240 |
| cgcgtatatt | tctaataaaat | cgatggttga | gattgaatgc | cgtgggcgt | tctcacgcgt | 300 |
| ccgattggga | tcactagtcc | atcaactcatg | gtctgcatttgc | cctttaaattt | ggcggggcga | 360 |
| ggaaagacca | atgcgtcatt | ggtagacgt | agctcttattt | gctcaggccct | ctctgctgct | 420 |
| ccttggatttgc | caatctcatt | ctctgatttgc | ccgtgcgttt | tgctctgctc | acttcagccc | 480 |
| agatggagac | cttcttgttc | acatcggtt | ctgtaaatgaa | gggacaccca | gacaaactct | 540 |
| gtgaccagat | ttctgatgca | gtgtggatgt | catgcctcac | ccaggacccc | gacagcaagg | 600 |
| tagcatgcga | gacttgcact | aaaacgaaca | tggtcatgg | ttttggtggaa | atcaccacca | 660 |
| aggccgatg | | | | | | 669 |

<210> 102

<211> 230

<212> DNA

<213> Pinus radiata

<400> 102

| | | | | | | |
|------------|------------|-------------|------------|-------------|------------|-----|
| atccacctcg | gaatgaaatc | actatgcaca | ctccaccc | ttttggctt | cttttctcg | 60 |
| tgccttacc | atcagaatca | agcacgaaga | gtaaatatca | cccatgctt | acaagtgggt | 120 |
| tggtagcatt | agcgattccc | ttcacccaaat | gaaccc | tttgcgtatga | gtggacaacc | 180 |
| taaagtgtt | tgctggatgt | gagtggacaa | ccagagtgg | ggttggggaa | | 230 |

<210> 103

<211> 596

<212> DNA

<213> Eucalyptus grandis

<400> 103

| | |
|---|-----|
| actttgaaag ggtctcgagt caaagtgctc aaattgagag ggagaatttt agaacaaaat | 60 |
| cagatttgg aatacatgc cattttagg ggattttggg gatttcgc atggcgtcgc | 120 |
| gtcgtcgccg ccttcttct tacagattgt atcctccat taaccgcgtg gacctgcact | 180 |
| gtaacccga aacggtgaaa gccaatttcg tctttccgc tcctccactc agcttcgtgg | 240 |
| aagattaaaa tcctcaccgt ccgtcaaac gccacgtggc gcgttagtt gcgcgtggaa | 300 |
| aggtcctcac gaaccgtaaa gggcaaaaaa aaggaaaaat aaaaaggag gaggaggagg | 360 |
| gaggaggaag aattgtccga ttgaaaataa gagtgccgt gtgtggtgt ggtagatctt | 420 |
| gaattgaacg agctaattcc gcgtatttaa accccccccg cttcctcatt cttcctgtc | 480 |
| catttcaact ctcccctctc ccctcttcc tgccctcga tcgatccagc gatttccta | 540 |
| tttccggacg cggggagcag ctcccttgc cgaaggttct aaattagtgt ggagag | 596 |

<210> 104

<211> 653

<212> DNA

<213> Eucalyptus grandis

<400> 104

| | |
|---|-----|
| aaaattttcc tttattttct tttcatttaaa aagataaata aataaaaaaaa aaaaagaagg | 60 |
| aaaacacatc gaggtgaggc ttaaagggtgc taggcaagga ccaccaagcc tacacaaggg | 120 |
| tcggcgaccc tcaccaatgc tggggcgagg qtgagcaacc ctcatccaaa tctggagagg | 180 |
| gttgtcactc gagaaagggt cactggccct cccctaaccg ctactaacat cgttggcctt | 240 |
| cgtcaccacc gcactaacaa tggccacta attttatatt tttcgtgata ttaatcctat | 300 |
| taaaaaatgaa aatatctcct taattaatta agcttgcag gaccgatgta aacaaaatta | 360 |
| atgtaaatgg acgcgcctt gacttgccaa caaactcgaa acgacgtttc ctccgtctga | 420 |
| taactatctc gcgaccccg acgacatccg acgggtcaga tcgggtcccg gtcaaccatc | 480 |
| cagatccacc cgattttctc ccggccctcg acaactccca ccaccacctc tttcctccct | 540 |
| ctttccttcc ttcccttctc accagattt cccgagaaaa tcacagagag agaaagaaaa | 600 |
| acccacccgc ctagagagag aaagagagaa agagggaga gagagagaga gag | 653 |

<210> 105

<211> 342

<212> DNA

<213> Eucalyptus grandis

<400> 105

| | |
|---|-----|
| agttggtaa ccagtcta at tctggtaaca ttgcattgtc cttgatctca ataaaaagcat | 60 |
| ataggataga attatcttct gtcttgatgg tttccatgag aaccaactgc tatactatga | 120 |
| aaaatataa tggccacaa tattttggg acaaggaaac acaagattga gtcaacagtt | 180 |
| caggacccca gaaaaattat tcctgagttc gcagattatt ttcctaaaag tgaacaattc | 240 |
| aagaccctag ccaaattcatt cccaaatccca agttatgtga cactgcgact aacaaggcaa | 300 |
| gttggaaagaa accatcaatc aatctccatg ttaatgacag tc | 342 |

<210> 106

<211> 342

<212> DNA

<213> Eucalyptus grandis

<400> 106

| | |
|---|-----|
| ggctggaaag ctcatctctc caatttggtg aagattacag ctataagagg tagctatgt | 60 |
| gtgctggcca aatgcaagtgc atgaaatacg tggaccacca agtgcgaagg cattcgaaga | 120 |
| acgagggtcg aatttatagt gggcgaagga tgatttagtg gaatatgaca agaaaatagg | 180 |
| tttggaaagag aaataaaatat tatgatagtgc aagggtcttc acatggtag tttgatctgt | 240 |
| ccgagggtgt ccacccttgc ctgatccgca attgcttgc gtcgtgctga attttagagt | 300 |

| | |
|--|-----|
| gtagccaaag taagaatttt ccttcactg tccggacatt tc | 342 |
| <210> 107 | |
| <211> 948 | |
| <212> DNA | |
| <213> Eucalyptus grandis | |
| | |
| <400> 107 | |
| ctgacaaaatg caaatatcta aaaccattgg ttgttggtg cttgcaagtc tggattaccc | 60 |
| cactttatgt ttcacccccc aataatgaat aacaaggta tcggaaaaaa aaggaaaggg | 120 |
| aaattcgcac aaccaaagtt gctatgcaga agtcaactca atcctaataca agttgatgag | 180 |
| agtgttggc cctatccc gcagcaaaca tgaatctcg ttcatctccc tcgcaaaaga | 240 |
| taaggaagct gaaaaagctt tcctcctaag tttgttggca agcaaattga ttttgtacca | 300 |
| gaaataaata caaaatgaaa cccaagcaat cacgcatggc ctgatttggc ccatgtccat | 360 |
| ttgatctccc tctactatcc ttctcgctt ctcagcaaa cttagtgcg taacagtcaa | 420 |
| tgtatccccg gctctctctc tctctctctc tctctctctc catttattcc atccatgttt | 480 |
| ttgttggc cacaacactt atcattgagg tgctaactac tgaattcccc taactaaaaa | 540 |
| ttggAACCTC tcacctaatt tcattttctc ccactttgat gagcaccact ctctttccca | 600 |
| gatttcaat aaattggccac tctctccctc ctctttccctc acacaaccaa aagccttctt | 660 |
| caagtaccac ttcttcactg tcctctcttc acaatcccc tcttaccaag agcaaagcaa | 720 |
| aaaacatgat gaagagactg tcatttctgc tcctactggt cctgctcttc caatgctcta | 780 |
| ccacccctggc tcagcctgcg gccggcccaag ctccgcctgt gatagcccc gctgcacctg | 840 |
| ctacgcctgc cttaggcccc gtcctctcg tcttaggccc agtcctgcg ggcccaacccg | 900 |
| acatcacgaa ggtcctcaag aaggtgagcc aatttacggt gtcgtca | 948 |
| | |
| <210> 108 | |
| <211> 362 | |
| <212> DNA | |
| <213> Eucalyptus grandis | |
| | |
| <400> 108 | |
| ccatcactca taatcaacaa ggatatctca tcatgtcttc caaccaaatt aaaccccaga | 60 |
| catctctaaa gcagtatgga aaagaaaaaca gtccggaaat ctctagctca aaaactgtaa | 120 |
| ccccgaccta attccgggtt tctctgatta catcaattct tatgtcttaa cactccattc | 180 |
| gcacccctccac aataaataga tcggcccttc atctccctt accatcgaat ccaatcccc | 240 |
| aaacacttgc tcagacacca tcaaattcctt cgcaaagtct ttttcttaca aaaaacaaac | 300 |
| gaaagcaacc atgaagcacc agttcattgt tctggctctc ttattcctca tcaacacagc | 360 |
| cc | 362 |
| | |
| <210> 109 | |
| <211> 326 | |
| <212> DNA | |
| <213> Eucalyptus grandis | |
| | |
| <400> 109 | |
| aaaaattaca atcaatggtt atcaatggat gttacaaagg gaggttacat atagaggta | 60 |
| taaaaagaggg ttacaaatag atgtctcaa caattacca gcggttagat tgactccact | 120 |
| attttgcgg ttctcttgac tttactatct caacgattac tttatttcat catgttgcg | 180 |
| gttgcattca tgattgttga cttcactttt tgtcgattcc ttcaagctgc tgattttca | 240 |
| agttgcacat aattttattc ataaatgacg aaactctac ctcattccatt aagtttggta | 300 |
| cttgcacaca ataattaaat tcggta | 326 |
| | |
| <210> 110 | |
| <211> 296 | |
| <212> DNA | |
| <213> Pinus radiata | |

<400> 110
tgctcccggt catgacacccg ccattctcgc tcttcatttc caattcaaat cacttggttg 60
ttgttcacac acacgggtct ttatatgacg agtgctgctg cgattataaa tagacggggc 120
aattacaaca aaaactcaca gcatttgaag gaagttggag tggtagagtg agaaatacac 180
agcctaatact gaaggaagtt cgagtaatacg agtgagaaat ggatcttctt ctccatcatga 240
tcatgttgtt gatgatgggt gtagcaatgc ctactcattc tcaacaaatc actagt 296

<210> 111
<211> 723
<212> DNA
<213> Pinus radiata

<400> 111
cgttttacgc ggaaacaatg aaaacagtac aatcgaaaga gtcaagtcgt gaggttcatt 60
tcgatgaagt tcccagagat tgtctcggtt aacgtttccct ctttttcgg gtcaagtcgg 120
gtacagaaga ccactttctt tacgcggtca agacaccgccc attctcggtt caagtcgg 180
ggtccctcctt gctttccctt tttccaaatc cgtaaaaattt acagattttt ttaatgtatg 240
aagcccactt tctttatgcg gttgctccca gtcaagacac cgccattgtt gttcacacgc 300
acgggtcttt atatgacgag tgctgctgcg attataaata gacggggcaa ttacaacaaa 360
aactcacagc atttgaagga agttggagtg gttagagttag aaatcattt aaggagttg 420
gagttgtaga gtgagaaatc atttgaaggg agttgagaaa tatattggga atctctctt 480
tttgcagcaa ttagatctt ccttaatgc tttgagtggg agaattccga cagagttgg 540
gaacctctctt ctttgcggc aataagttgg agtggtagtt ggagtggtag agtgagaaat 600
acacagccta atctgaagga agttggagtg atagagttag aaatggatcg tcttcttctc 660
ttcatgttga tgcttgtat gatgggtgta gcaatgccta ctcattctca acaaataact 720
agt 723

<210> 112
<211> 1301
<212> DNA
<213> Pinus radiata

<400> 112
actatagggc acgcgtggtc gacggccctg gctggtagcg acagagctgg ttcagtgacc 60
gttcgtgatt agccgcagta aaacaaaacc ctaaccgtaa cccttcgcg cagattccat 120
ccttccccgtt cctaccaaaaa cccaaacttc ttgcccgaac tcaccttcta tgtattaatt 180
cttatttata ttaataataataaaatagtt aaacataaaat ttataaatttta attaattttt 240
atgattttta ttttagtttta aaaatgtgac attgttatag attaatgctt atgaacgttt 300
attggccata attaccctaa ttaattataa ttaaaatata tagttataat taaaaattt 360
tatattttat aaattgaatt aagaatttct gatgatattt catcattcaa ttccatctta 420
tcaaagtttag agggaatagt taaccatgta cttagatctat tcatactaa catttgccaa 480
gttcgtacta ggagacttgg attttttta aaacataatt ttggcagtaa aaagtgaatt 540
ctattgtttt gaaaacaaaaaa caaaatacag gaagcgtgat tgggggttg ttgttgaact 600
tgccggggca aaagaagaat gattagcggt agaggagttt gtagttacgt tcaactaaat 660
gcgtgactaa attatttatac ctccgcctatg gaagcagggtt attcacacac aacttgctgc 720
acacattgtc ctcaaacctt tcctataat atccgttagca ggggctgcga tgatacaca 780
cgcatttaat caaaactactt tgattactt ctgtgggttc tactttctt gaatagtcag 840
ttctgtgtt tttagaagat ttataagaat ggccaaaattt caggtatcaa acgggaacgt 900
cgtgggtgtt gctgcgtatgt tattttatggt ggtgggtggcc atgaaaacc atcacgtcgc 960
cgcccaaagt gctgactgcg ccgccaccgc ggagtccctg agccctgcg cctccgggt 1020
ggaaaacaac ccacaggatc ccactcccgaa atgctgtgtt gttcttcaga ccgctaattgt 1080
cgactgcattc tgcccccctcg tccaatcaac catgcaatttgc cttccgaat ggggtcttga 1140
gactcctcag tgcccaagcg actagggtctt caagaccgtt actgagttgtt ggtttcagag 1200
acagtagaca ttctgcctaa taaatgattt tatgagagctt tttatataat gaattgctca 1260
tatgcttcc tagatataat tccatatgtct 1301

<210> 113

<211> 3070
 <212> DNA
 <213> Eucalyptus grandis

| | | | | | | |
|-------------|--------------|-------------|-------------|--------------|---------------|------|
| <400> 113 | | | | | | |
| agcaccatca | gaaaaaaaaata | gatgggatag | agtgggacac | cacctgttca | gtttgattcc | 60 |
| ctttagatga | cctacagtga | tagcttgatg | aataagatgg | gataatagat | tcaccagagg | 120 |
| gataaaaaagg | tagggagata | ggggatctcc | ccgtctgatg | cctcgggtag | gttggaaata | 180 |
| aggcaaaaagt | tcgcccgttga | atttgacagc | aaaagacacc | gtcggttatgc | attgcatgat | 240 |
| ccattgttacc | catgttagggt | gaaatcctag | agtggggaga | tagtccttta | gaaagtccca | 300 |
| ttccacccta | tcataggctt | tctgcatatc | cattttaaaga | acagccccgga | attgacgtct | 360 |
| acattttctg | actttaaattt | gatgtagaac | ctcttagact | attaaaatat | tgtcctgaat | 420 |
| ttgacgtcca | ctgacaaaag | cgctttgtc | ctggaaaata | agtacaggca | gtttagggctt | 480 |
| aaggcgattt | gcaatcacct | tagaaatgtat | cttataatgcg | taattacaaa | gactgatggg | 540 |
| gcggattttgg | tctaattgtt | caggatgtgg | taccttgggt | attagggcta | tgtatggttcg | 600 |
| attgagattt | ggtggatata | tgcacaaattt | aaaaaaagtgc | tgcactgtat | agaatagttc | 660 |
| atcctggagt | atataccaat | gatgtctggta | gaagagtcca | ttcaagccat | ctggaccggg | 720 |
| ggccttggta | agtcccagt | ggaaaagtagc | ctctcttaact | tccttcttgg | taacaggagc | 780 |
| tattagggac | atattcatct | cattagtaac | aacctaagga | cactggttca | gaataggcaa | 840 |
| gtagtctcga | tgtcccactg | tctgaaaatag | atgtggaaat | taacctatcg | tcatcatctt | 900 |
| caaaaatttca | ggatcgcgca | cccaagctt | attgtcatcc | tgcaacatac | taatcttgg | 960 |
| tcgttggat | ctttgtatag | tttgtgcatg | aaaaaaattt | gtatttttgt | ccccccagct | 1020 |
| gagccatttta | attcgagagc | acatcgccca | aaattattct | tcttgcgtgcc | ataactgtcg | 1080 |
| aattttctct | tttaggttaag | taaccaatga | tgcgcctatgt | tgacaaaaaaag | gctgattagt | 1140 |
| atgatcttgg | agttgttgg | gcaaatttgc | aagctgacga | tggccctca | gggaaattaa | 1200 |
| ggcgccaacc | cagattgca | agagcacaaa | gagcacgacc | caaccttcc | ttaacaagat | 1260 |
| catcaccaga | tcggccagta | aggtaatat | taatttaaca | aatagcttt | gtaccggaa | 1320 |
| ctccgttattt | ctctcaatcc | cataaaacccc | tgattaattt | gttggggaaag | cgacagccaa | 1380 |
| cccacaaaag | gtcagatgtc | atcccacgag | agagagagag | agagagagag | agagagagtt | 1440 |
| ttctctctat | attctggttc | accgggttgg | gtcaatggca | tgcgtgcacg | atgtacatat | 1500 |
| tgggttaggg | tccaaatattt | tgccggaggg | tttgtgaacc | gcaaaagtcc | tatataatcg | 1560 |
| acctccacca | ccataacctca | cttcaatccc | caccattat | cgttttattt | tcctctgctt | 1620 |
| tccttgcgtc | gagtctcg | gaagagagag | aagagaggag | aggagagaat | gggttcgacc | 1680 |
| ggctccgaga | cccagatgac | cccgacccaa | gtctcgacg | acgaggcgaa | cctcttcgccc | 1740 |
| atgcagctgg | cgagcgctc | cgtgtcccc | atggtctaa | aggccgcat | cgagatcgac | 1800 |
| ctcctcgaga | tcatggccaa | ggacgggccc | ggcgcgttcc | tctccacggg | ggaaatcg | 1860 |
| gcacagctcc | cgacccagaa | cccccaggca | ccgtctatgc | tgcaccggat | cttccggctg | 1920 |
| ctggccagct | actccgtgct | cacgtgcacc | ctcccgac | tcccccgtatgg | caaggtcgag | 1980 |
| cggctctacg | gcttagcgcc | ggtgtgcaag | ttcttggtca | agaacgagga | cggggtctcc | 2040 |
| atcgccgcac | tcaacttgat | gaaccaggac | aaaatctca | tggaaagctg | gtattacctg | 2100 |
| aaagatgcgg | tccttgaagg | cggaaatccc | ttcaacaagg | cgtacggat | gaccgcgttc | 2160 |
| gagatcatg | gcacccgaccc | gcatgttcaac | aagatctta | accggggaaat | gtctgtacac | 2220 |
| tccaccattt | ctatgaagaa | gatactggaa | acatacaagg | gttgcgggg | cctcgagacc | 2280 |
| gtggtcgtat | tcggaggccgg | cactggggcc | gtgctcagca | tgatcggttc | caaataccca | 2340 |
| tcaatgaaag | ggatcaactt | cgaccggccc | aacggattga | agacgccccca | cccccttcctg | 2400 |
| gtgtcaagca | cgtcggaggc | gacatgttgc | tcagcgatcc | aaaggagat | gccatccat | 2460 |
| tgaagtggat | atgcccatttgc | ttggatgtacg | accattgcgc | gaagttcc | aagaactgtct | 2520 |
| acgatcgct | tcccaacaat | ggaaaaggtga | tcgttgcaga | gtgcgtactc | cctgtgtacc | 2580 |
| cagacacgag | cctagcgacc | aagaatgtga | tccacatcg | ctgcacatcg | ttggcccaca | 2640 |
| acccaggccgg | gaaagagagg | acacagaagg | agttcgaggc | attggccaaa | ggggccggat | 2700 |
| ttcaggccctt | ccaagtcatg | tgctcgctt | tcggcactca | cgtcatggag | ttccctgaaga | 2760 |
| ccgcttgcgtc | tgctccctctg | ttggatgttt | catgggttctt | ggatttgaaa | ggtcgtgaag | 2820 |
| gagccctttt | ctcacagttt | gcttcggcat | accaagttct | tctcataaaa | gaaacaata | 2880 |
| agaagcgact | gtatgtatggc | gcaagtggaa | gttacaagat | tttgttgg | atgtctataa | 2940 |
| agttttggat | tttctgcata | ctgatccac | agaatgtgt | acgaaacgac | gtatataatggat | 3000 |
| gtgcctgaat | gatggaaattt | gtgatattct | gttccctttt | tcatgtaaatc | acttcgaaca | 3060 |
| aaaaaaaaaa | | | | | | 3070 |

<210> 114
<211> 1227
<212> DNA
<213> *Pinus radiata*

<400> 114
aaatttcaag aggaagagat taattcttt aatttataaa attatataat aaaatattta 60
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agtttattccc ctaatgtgg aacaatttgat tagaagttc atgaaaaaaa tccaatcatg 180
ttaaagtgc acctaattgtg aagacaattt aattttatgt ctatgaaaaa aatccaatca 240
tattaaaagt ccaatttgatt agcaattttt tgagaaaaat ccaattatgt taaaagtac 300
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gaagtagggc caagtttgct tagtacact ctaatccccca acaccgttat tactatcttc 660
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taaattttgtt gaggcagcct atcctcagcc tatacataact aatttttgca gctcgattag 780
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cagccggggc ttctatgtca cttttgcac taccgaattt gttgtaaagc gcctcgaga 1020
atgtgggtgaa agtatcgccc atcgtgatttgc gatgggtgtgc agcgagaacg atgatgtat 1080
taacataaaaaa tttgaaacag tgcccgacgg actgcctccc caccacgatc gcagttactca 1140
gaatcttgcg gagctcttcc aatccatgg aagagaacgct catattcaact tccacaagg 1200
gatggagaag ctccagaatc ttccggga 1227

<210> 115
<211> 1169
<212> DNA
<213> Eucalyptus grandis

| | | | | | | |
|-------------|-------------|------------|-------------|------------|-------------|------|
| <400> | 115 | | | | | |
| ttcatttatat | gattattacg | tcataatgat | cgatttctag | aaatttgag | acatatgtaa | 60 |
| attcaggagg | aatttcaaga | aacgcgcgtt | actttgaaag | ggtctcgagt | caaagtgtc | 120 |
| aaattgagag | ggagaatttt | agaacaaaat | cagatttgg | gaatacatgc | catttttaggg | 180 |
| ggattttggg | gatttcgc | atggcgtcgc | gtcgtcggcg | ccttcttctt | tacagattgt | 240 |
| atcccccatt | taaccgcgtg | gacctgcata | gggcacgcgt | ggtcgacggc | ccgggctggt | 300 |
| ttcatttatat | gattattacg | tcataatgat | cgatttctag | aaatttgag | acatatgtaa | 360 |
| attcaggagg | aatttcaaga | aacgcgcgtt | actttgaaag | ggtctcgagt | caaagtgtc | 420 |
| aaattgagag | ggagaatttt | agaacaaaat | cagatttgg | gaatacatgc | catttttaggg | 480 |
| ggattttggg | gatttcgc | atggcgtcgc | gtcgtcggcg | ccttcttctt | tacagattgt | 540 |
| atcccccatt | taaccgcgtg | gacctgcact | gtaaccccg | aacggtgggg | gccaatttcg | 600 |
| tcttccgccc | tcctccactc | agcttcgtgg | aaagattaaaa | tcctcaccgt | ccgtgcaaacc | 660 |
| gccacgtggc | gogttagttt | gcgcgtggaa | aggtcctcac | gaaccgtaaa | gggcaaaaaaa | 720 |
| aaggaaaaat | aaaaaaaggag | gaggaggagg | gaggaggaag | aattgtccga | ttgaaaataaa | 780 |
| gagtgcgggt | gtgtgggtgt | ggtagatctt | gaattgaacg | agctcaattc | gcgtatTTAA | 840 |
| acccggcccc | cttccttcatt | cttccttgc | catttcaact | ctccctctct | ccctctcttc | 900 |
| tgccccctcga | tcgatccagc | gatcttccta | tttccggacg | cggggagcag | ctcctcttgt | 960 |
| cgaaggttct | aaatttagtgt | ggagagatgg | tgaagatctg | ctgcatttgt | gtggctatg | 1020 |
| tcggcgggccc | tactatggcc | gtgattgctc | tcaagtgc | gtcagtagaa | gttgcggctcg | 1080 |
| ttgatatttc | tgtctctcgc | atacaagcct | ggaacagcga | acagctccct | atctatgaac | 1140 |
| caggccttga | tgcggtgtg | aagcaatgc | | | | 1169 |

<210> 116

<211> 947
 <212> DNA
 <213> Eucalyptus grandis

| | | |
|-------------|--|-----|
| <400> 116 | | |
| ggctcttgc | ctcatctctc caattttgtt aagattacag ctataagagg tagcttatgtat | 60 |
| gtgttgttca | aatgcaggta atgaaatacg tggaccacca agtgcgaagg cattcaaga | 120 |
| acgggggtcg | aatttatagt gggcgaagga tgatttaggtt gaatatgaca agaaaaatagg | 180 |
| tttggaaatgg | aaataaaatat tatgatagtgt aagggttcc acatggttt tagttgtatgt | 240 |
| ccgggggtgt | ccacccttgc ctgatccgca attgtcttg gtcgtgtca attttagagt | 300 |
| gtgtccaaatg | taagaatttt cctttcaactg tccggacatt tcgattgcta catggaccat | 360 |
| ccccgtgtct | cccattttcg agaaccttcg agtggaaagc atgaataacc caccttgcac | 420 |
| tatatagggtt | gccgaatatg ccttagggcgc gaccatcatt gagacggagt tgggggtgtc | 480 |
| cgtcggttcc | accaccacca ccaccaccac caccaccacc accaccattt ggcactgtata | 540 |
| tagcgactcc | accactaccc caaccgaggt tggcaactc tagattgtac atggatata | 600 |
| tcggagtagt | tgaacatgtat cagatcaatg gtatgttta agactctaga aattattgaa | 660 |
| gcaatatgtt | aaatcagata cgtgtgagaa agtgaattac taattgtat ggctttcatg | 720 |
| atacttaaac | ttcaatgtat tggtaatgtt aagagcaatg tgatctccac aaatactact | 780 |
| agaaggccaa | gtccctttct ttatgccaa gtcctaaatg ttaatatttca aactctacct | 840 |
| ataatcaaatt | tgtatgcaaa ttgcataatc gcactgattt ctatggttt attaatctag | 900 |
| ataagaactc | tctccaagac attaactaat taagattgac cccattt | 947 |

<210> 117
 <211> 1766
 <212> DNA
 <213> Eucalyptus grandis

| | | |
|-------------|--|------|
| <400> 117 | | |
| atccagatcc | ctacgaactg gattcacaca gtcactgctg taagctctgg ttttttttag | 60 |
| cttaggaagc | aggttatgtat caaacatgtat taaaccatcg cgtgttcgccc agccatcaga | 120 |
| aatggaaagg | caaatgttgc tatagtgtat gacagatcat gctgagatgtt ttgattatga | 180 |
| atcttactga | tgactgtcat ttatgttgc gcaactctgtg tgggtgggtg tggtaatgt | 240 |
| gtaatatcaa | attaaccaga cgatagggtg tgaagattag ctgttggggcc accgtggcga | 300 |
| aagggtctt | atacaagcca tcggcagtga cgcagaactg tagagaaccg ctgtaaacaag | 360 |
| tcttcgaatg | cattttttatgtacagca cgacatgttgc ggggttcgag tggtagcgaac | 420 |
| agttcgtgcg | agaaagatca ttttcaatag cataaaagag tctgttttgc gctgaaaca | 480 |
| tggaaagaac | ttacatttca atcatttgcg agaagattat aacaatccct aaatgggttga | 540 |
| gattttagtt | agtccattcg aactaaatgtt gcaagatgtt cagttttca agtggatgtat | 600 |
| atttctcatg | tatgttccgc agaggcaatc accttgcattt taactagaca tctagagaac | 660 |
| ctaacaagga | ttgatgggg tgaggtgaaa tgtctgttgc ctcttataa tggatccagc | 720 |
| gatgccttac | agagcggatg gatggactg gcaagtcttta atccttagt cgaatgttg | 780 |
| attggtaaca | gatgcctttt ctgttttca aatcacagct gacaaatgtca aatatctaaa | 840 |
| accattgggtt | gtttgggtct tgcaggcttgc gattttttttt cacccttcaa | 900 |
| taatgaataa | caaggtactc gggaaaaaaa ggaaaggaa attcgcacaa ccaaagttgc | 960 |
| tatgcagaag | tcaactcaat cctaatcaag ctgtatgttgc tttttttttt tattttctgc | 1020 |
| agcaaacatg | aatctcgatt catctccctc gcaaaagata aggaagctgc aaaagcttcc | 1080 |
| ctcctaagtt | tgttggcaag caaatttgcattt ttgttccaga aataaataca aagtggaaacc | 1140 |
| caagcaatca | cgcatggcct gatgttgc atgtccattt gatctccctc tactattttt | 1200 |
| cctgttttct | caagcaact agttgtgttca acgtgtatg atccccccggc tctccccctc | 1260 |
| tctctctctc | tctctcttca tttttttttt ccatgtttttt gtttttgcac caacacttat | 1320 |
| cattgaggtt | ctaaactactg aattttttttt actaaaaattt ggaaccttc gcctaaatcc | 1380 |
| attttctccc | actttgtatca gcaccactt cttttttttt tttttttttt atttccactc | 1440 |
| tctcccttcc | cttttccatc acaaccaaaa gcttcttca agtaccactt ctttccactc | 1500 |
| ctcttttccac | aatccccctc ttaccaagag caaagaaaa aacatgtatca agagactgtc | 1560 |
| atttctgttc | ctactggtcc tgcacccatc atgttgcaccc accttgggttcc agcctgcggc | 1620 |
| cgccccagct | ccgcctgttca tagccccggc tgcacccatc acgcctgcct tagggccggc | 1680 |
| tcctctgttca | ttaggcccaatc cccatgtttttt gtttttgcac caacacttat | 1740 |

ggtagccaa ttacggtgc tgctca

1766

<210> 118
<211> 1928
<212> DNA
<213> Eucalyptus grandis

<400> 118

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| ctggttccac | gtcaagcacc | tcctggagt | acaaggaaat | gccaccggaa | aatcaagatt | 60 |
| gctgttttag | gctcaacttt | ttcctgagct | aagtgggtcg | cattcaaga | aacagtagaa | 120 |
| gttacgttct | ccatggaaac | tcgaaaggat | aaaaattaag | aaacggaagc | tccatgagaa | 180 |
| cgatgggggt | cagcatca | cctattgtat | tgtgctctca | ttatctctgg | cctacttgag | 240 |
| aagtgatctg | ggattcgcta | ttagtgaaaa | caatcgcagg | ctaactaaga | tcttttatgc | 300 |
| taatcatatg | gagaaatatac | cctcttaagg | gaagcatatg | agtttttct | taggatgact | 360 |
| acgcttattc | aaaacctatac | atacacgtca | tgccaataat | accacttgt | tgttccttta | 420 |
| ctcaggatcc | tcgatagcca | atactaattg | gcaagaacct | tgagtaacaa | gctgaggat | 480 |
| acataggcct | atcattcatt | tactagactc | gattgcaagc | acacatgatg | cacattata | 540 |
| tcagcaatca | gcaatcatat | ttccgaaaaat | tgtctctcg | agaaaaagag | agagagagag | 600 |
| agtccatagt | atgtcatagc | caaaaagaaaa | attagcaaca | agatctcgag | gtattgtga | 660 |
| aaggtagggc | aatatcaaga | attccattgt | aattaatgtg | tctagacaac | atctaagaaa | 720 |
| aaaaagtgaa | agaaaaagagc | tatatagtta | ataatattta | tacatgttgg | agataaaactt | 780 |
| gagttagagg | tttatgacct | cctagattga | ttaaacagac | caaatagtag | taatcagggc | 840 |
| acttctaaa | tctactaata | tattgttcaa | acatgacttt | taacctatct | tgattagaaa | 900 |
| tgagtgttca | aagaaaacta | atcatgcata | tatTTTGTG | cccaatcacc | ctagggtgga | 960 |
| aaaaaggcta | tctactcaac | aaatgctaaa | atTTTACGGC | tacacgtggc | cacagttgca | 1020 |
| gtacaattca | tctcaaggaa | ggactaaaac | tgcaaagaga | agaagactac | ataggaaaaa | 1080 |
| ggaaaaacaaa | gaagccttga | agtaaagagg | agcataactc | actcaactga | gtgtgttcgc | 1140 |
| caatgtggca | aagaaaaagc | ctctaagatc | ctcacaaatg | gccacgtgg | ctcacacggc | 1200 |
| accctataca | agtactacta | ctactacagg | actatgccag | aaggagaagt | gttagcgtga | 1260 |
| gtaccacgtg | cgcacgcaga | atctaaggct | agcaaaaact | atgctgatgc | aagcagctcc | 1320 |
| cccaccatg | aagatagtac | tgtaatgtga | ctcttgacag | cgaaacccaaa | cagtactcca | 1380 |
| agagaaaagc | caaagcagca | aaaatggggc | ccgcagcaag | aacctctgac | tcgacctgga | 1440 |
| cccaccaaga | acaacagcca | gccacaaaat | aacgtaaaga | cttttgcgg | ccactaactc | 1500 |
| ctcgacaagt | ggcactgctt | ggattccctt | catcttcct | tcacttaacc | cccaccctcc | 1560 |
| ctcacactgc | attcaactca | aacactcccc | agtttcagag | tttcatttgag | aaatatgttg | 1620 |
| aaggaagaca | cgagtggcag | cgccggcagc | agcggcagcg | gcagcgggtgg | taatagctgg | 1680 |
| gcacgtgtgt | gtgacacttg | ccgctcgca | gcatgcaccg | tgtactgccg | tgccgacttg | 1740 |
| gcttacctat | gctccagctg | tgacgctcg | attcacgcag | ccaccgtgt | gcctcgcgcc | 1800 |
| atgagcgcgt | gtgggtgtgc | gaagcgtgcg | agcgcgcggc | ggctgccttc | ctctgcaagg | 1860 |
| ctgatgcagc | atcaactgtgc | accgcctgcg | atgcagacat | acactcagcc | aaccgccttg | 1920 |
| | cgccgcgc | | | | | 1928 |

<210> 119
<211> 602
<212> DNA
<213> Eucalyptus grandis

<400> 119

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-----|
| attgggagga | agtagagtgt | gctgtgtgag | attggtcgt | gagctggctc | ttgtggagat | 60 |
| ggcaagtgtat | tgtggcttct | gtgatgcata | tatataaggca | agggacgtga | tgcgaggaa | 120 |
| gtatgtatca | tcagcttata | ataatgattt | gtcagttgt | aagtgaatat | taagggcctc | 180 |
| atgggtgttgc | gttcacggcc | caaggcgggg | cccactcacc | gggggatttta | tcgtgttgc | 240 |
| atacatccag | ggtcagggtg | tttggggaca | cactttgcca | tcttatgtgg | gcatgtatcg | 300 |
| attgagaaga | atccgatcct | tcttttcct | aaaccattga | acccaccatg | agaatctttg | 360 |
| tttggaggaa | aaaataaaaaa | aatagattga | gacgtattct | aggagaggat | agcaaaaagaa | 420 |
| tgtgactttg | tttgggtgtg | tatcgatttgc | atctaaggaa | aaaagacact | aaccgttcta | 480 |
| caatTTTCA | acaactctt | catttaagca | ccgtgacttc | caaaaatcga | tcatccttat | 540 |

acggttggaa atcacacgtg gcattgctgt aaaagaaaata gttgatgggt ctcattgaag 600
 at 602

<210> 120
 <211> 1326
 <212> DNA
 <213> Pinus radiata

<400> 120

| | | | | | | |
|------------|------------|------------|-------------|-------------|-------------|------|
| aaaaaaggga | aacattatac | caaattttat | gatatcttc | aacaacatac | tcttctatat | 60 |
| atgggcctc | ctctgatgga | cccttgtcaa | cttctcttt | ttatgtgtaa | tgcctcaaga | 120 |
| ccccccactc | acaagataat | atctttcca | taatataata | tatattccta | ttgaagcagt | 180 |
| cttttgcgt | accgagatac | ctactcatgg | tgaaggccgt | gtcttgacgc | ttttccatg | 240 |
| gtttatgg | aaagtaatag | tactggacct | catttgcac | gacacataat | attcttactg | 300 |
| acgacactt | gtttgatttc | ttatagaaaa | atgcaagggt | gcacaaaaaag | atggaaagcc | 360 |
| cgacctatca | agcatacga | gggtcatgtt | cacaccctct | gaaatcttca | gagtctcacc | 420 |
| ctatgttgg | cgctaatac | tgggatcacg | ctgaaacata | tcgtaaatga | cgaatcaatc | 480 |
| aatcaatcat | tgaaaaatat | accagataac | tcctacgatg | gaggggatta | tttgcgtacc | 540 |
| ctccgcgtgg | gtgggcacat | tgggcaggtc | ctttggtaag | tcttggagac | agagtcacgt | 600 |
| ttccataatt | gaagtggaca | tttatgaatc | tttcgaaaagt | tgtagaactc | ttaattttcg | 660 |
| acgaaatagt | ttgacacgtt | ttgtacgatc | tggttttcc | ggggAACGCC | aattttggtt | 720 |
| tctgaaggac | agcatttaca | atattgtctg | tcgttgacca | ggacagctgg | ctcggaaactc | 780 |
| gggttccga | tgcgcaggaa | gcgcattgaa | atgagaatat | aatcttagtt | tacctgtgga | 840 |
| gctatcacaa | aatactaaaa | ctggtggaca | tacctcttgc | ctgttctcga | aatcgccaa | 900 |
| aatgggaaag | aagagggtag | agctgaaacg | cattcaaaac | cctagcagtc | gacatgctac | 960 |
| tttctctaaa | cgcaagaatg | gattgctaaa | aaaggcggtc | gagtttctg | tcctctgtga | 1020 |
| tgctgaagtc | gctctcatca | ttttctctga | aactggcaag | atttacgaat | ttgcgagcaa | 1080 |
| taacgatatg | gcagcaattc | tggaaaata | ccgagttacac | gaagaaggca | ctgaaacgtc | 1140 |
| cagtcacaca | tcgcttcaaa | acgtaaagta | tcatgaatca | gggcttgaga | aattgcaaga | 1200 |
| gaagttgacc | gcttgcaaaa | agaaggaaaa | gaacttgatt | ggtgaagact | tggaggtatt | 1260 |
| aacaatgaaa | gaactgcaac | ggcttgaaaa | acagttacaa | attggcataaa | aaaggtagt | 1320 |
| gataga | | | | | | 1326 |

<210> 121
 <400> 121
 000

<210> 122
 <400> 122
 000

<210> 123
 <400> 123
 000

<210> 124
 <400> 124
 000

<210> 125
 <211> 1489
 <212> DNA
 <213> Eucalyptus grandis

<400> 125

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| atcattgcac | agatgctggc | ctatcaagcg | tccatcgatt | aatgtcatga | tgattcgtgt | 60 |
| catcaatttt | cccatagcga | gtcagcgacc | accgcacgca | cgatgccgat | gtcgccgtgc | 120 |

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|------------|------|
| gaaaaacatc | gagcagacgg | catgctaaag | acatgcattt | cggtcctctc | tgtatggtaa | 180 |
| ttgcaatgca | gaagagactc | ggatggattt | gatttcaaaag | tgacgacact | gacttctgcg | 240 |
| cattcgaaa | tacatgcata | tttcaaaaa | ggatgttct | gccacttctc | tttttcagtg | 300 |
| gcttcagtt | caagaaaccc | cattaatttc | aaaagagaaa | gcagggtggct | atctgcacgg | 360 |
| aagaatggtc | tcattgttct | atthaagcat | ttcctttttt | cattgcacgt | gtggcttaga | 420 |
| agagttttc | ctttcctcat | atgaagccaa | aataccatgt | ccgagttca | cataatacaa | 480 |
| aacatttccc | aggaagaaaa | tgttcccaga | gaccacatga | gttctcttga | aatcttgaa | 540 |
| attataacc | ctgaccatg | aaatcgggca | agaaaaactg | taatggcatc | agcaggatgt | 600 |
| gaagagaatg | gaggcggcgt | acacctaattg | cggtttacc | gagtccggata | tggttgcgt | 660 |
| atggacaaca | ggctgttgat | ttggtaagtg | tcggatffff | tagggagaca | aaagtccaac | 720 |
| ctatccccaa | gcaaattccgg | ggaatttcgat | ggtctcttga | atatgttaaat | gctttgaac | 780 |
| ttcagtgact | gagtccaaat | gatcttcttc | ttctgcaagc | taactaacct | tcggccttc | 840 |
| tcttggctgc | tttttgcac | tactactata | ttattgtttt | tagtaatgg | ggtagttgca | 900 |
| atagaagtaa | gcatagtgaa | aaagtgttga | tcggcaacaa | acaaagaagc | ttaatttata | 960 |
| ccgatccagc | acacctaatt | catctccaaac | tgttctctat | tcttgcacat | tcaaccgtaa | 1020 |
| tcagcagata | atcctcgta | ttaatcatta | ttctgaaaca | acctgttggc | ccaccaaaga | 1080 |
| aaactcatag | gtgactctgc | tttggttctct | tgcaatgcca | tatatacaccc | tgaatttctg | 1140 |
| atcgctctca | ctcatctgtc | gcattcaaaag | cctcaaagcc | gcttggtttct | tgaactttgc | 1200 |
| cttggcttca | aagaagaaaag | tcctcaaata | gaagatcgac | catatgggac | tgaagatatt | 1260 |
| ctcagtcggc | tttgccttca | tttggttgtt | ctgttcaactt | ggcttctgtg | atcaagacgg | 1320 |
| tttctgagt | ttagcttgt | gtggaactac | caattacacg | gattcatcca | acatctggtg | 1380 |
| gattaccgac | agtgattca | taagcacagg | aaagactacc | tatgttgaca | atatcgaggg | 1440 |
| caattcatct | ggtggttcgc | ttcggttctt | cccgattcc | aaagtccat | | 1489 |

<210> 126

<211> 1273

<212> DNA

<213> Eucalyptus grandis

<400> 126

| | | | | | | |
|-------------|-------------|-------------|-------------|--------------|-------------|------|
| ttgttaaattt | tgtgtgctt | atagggtctt | gttaatcaat | gatcagtgtt | ttttttacgc | 60 |
| atgtgatgaa | aaagtaattt | cttttgagaa | tatagttaca | tcgaaaggac | aatcaattcg | 120 |
| tttgacattt | taattttttt | tttgatagtt | taacaagtgc | ctcggaaacac | tcttcaacat | 180 |
| atcccttcac | tttattttgc | atatttatgc | ttgtacaaca | acattttcaa | ttgggtgatc | 240 |
| ataattcgta | atatttataa | tttttgcata | acaatgagta | actctataact | cctggattga | 300 |
| gcaaaacatat | ttgttaaagta | gttatgagag | tattacttat | acttagacgt | tgttagatac | 360 |
| tcatgatcg | atcatatgtc | cactagagga | tatagatttta | cctagatgaa | gccccttct | 420 |
| tagaagttagg | aaaaaaaaaa | ctattatatt | gacttgaacc | catatcataa | aaagtacgag | 480 |
| actcaaaaatc | caatcttaca | tgttatatgtt | tatataatata | tgttgcacaa | tgataacaat | 540 |
| cttttcaaga | atcaagacac | cagaaaaacca | tatttcaat | atccgtcaat | gtcaatgtcc | 600 |
| tactcacatc | gaacaggact | gccgcgtaca | caacaagttc | cccagctaca | gatttaccta | 660 |
| caatttaggaa | atgcaaccccg | aaaagacagg | tctccatttc | ttcccttcaact | ttcccaactca | 720 |
| tgaaaatgaa | atataatatac | acaaaatgcc | tgagcgacac | taaaggaaacc | aaagaacaac | 780 |
| gattccaact | cagagagaga | gagagagaga | gagagaggca | ctaatttttgc | gctgtcaac | 840 |
| aaaggaagca | actttattca | aatccatttt | gcttttagcgt | gcccgttaatt | ccaaaccaaac | 900 |
| atatcctcaa | agccctaata | tatactccca | caagcgcacc | tcgtttccca | cacacaagta | 960 |
| caaagcgtca | acttcttctt | cgtaaaactg | gtctcacaga | cactcgcttgc | tccctcagtc | 1020 |
| cacactttgg | cttagctcac | agcaactatg | gctgagacag | cgaaacccca | gaagctggtc | 1080 |
| gagctcgaga | aggtgcccga | ccccgaggcc | ggcgtgcccc | cgaaaggaga | ggaggcgc | 1140 |
| ccagaacccc | cacttccgccc | cccagtgcgg | gcccggccgg | tggaaacttg | cgtttggtt | 1200 |
| gacgtggcac | ttagggtttt | gctttcgca | gcgacactga | ccgctgtgg | ggtgatggtc | 1260 |
| acggcgaacc | aaa | | | | | 1273 |

<210> 127

<211> 3720

<212> DNA

<213> Eucalyptus grandis

| | | | | | | | |
|--------------|-------------|-----------------------|-------------|---------------|---------------------|------------|------|
| <400> | 127 | | | | | | |
| cgaagttcag | ctcccgttc | cctgatgtt tcaa atcttc | tttcaagtta | gaagtacata | 60 | | |
| tacagcaa ac | aagatcca ac | cctttctta | tcatgagccc | ttacttccac | aagt gacatt | 120 | |
| tggc actagt | cccaca attt | aatcattcta | tttccattct | ctgtaa atgt | accctattca | 180 | |
| aagg tggac | ataatgaccc | tttgaagcg | ttaggatcac | actttattaa | aagggaacaa | 240 | |
| caacattgac | agcaa atgc | cgcacttgc | ataaagttca | gacagtataa | taagttctca | 300 | |
| ttccaaaagg | ccccaa atgt | gaagg tacga | cttctcta | cctgtttga | tttgat tttt | 360 | |
| tcgc agagga | aaaatcatca | ccaaagactt | ataaaaattt | aagt tagcaaa | gaaaagaaaa | 420 | |
| gcaagattag | caa acagaga | ggagaaagag | aggggaagga | gtgatggcc | aacagccatt | 480 | |
| ctcccagaaa | ccacataaaa | aacaacaca | gaatgatcac | ttgtgaagaa | cacgcggagt | 540 | |
| tccaa gcaa | gcatctcgag | aatcaatgtc | gcttttctt | cacaagcatt | ggacagaaaa | 600 | |
| aaagagcaag | ctctaagttt | tccagcggaa | gcccggaaat | taggacgaa | ggcgacgaga | 660 | |
| aaacgaaaaa | ctagaaggaa | acaaaaatca | aaataaaaag | gaaagagagg | cctgtgcgag | 720 | |
| taataacgat | tgtaaggcaa | gacgatgaac | cggcaaagct | tgattcctgg | ttgcaaattt | 780 | |
| gggacgaaga | ttgctcaaaa | taggatgac | gggcgggtgat | tttaccgcga | agcgaacac | 840 | |
| agaatgcaag | gagcaagaaa | gagggtggt | gcagaatcga | cgcgcacagt | ggcagcagag | 900 | |
| tcgacgccc | cagcagcggc | ggaggtgtat | agcggagaag | gcgttagtagc | tgatgggt | 960 | |
| ggagtcgaca | agaggagaag | gcaagaagga | agagtcgtcc | ggaaccaat | tgtttggctt | 1020 | |
| tgggtgtgga | tgtttgttat | tttggtgaga | tgagagaacg | tgtttggttc | attgtttaag | 1080 | |
| attaataatg | tgttcacgag | ccgaacaat | tttcgac | tttgcac | aaaacatggt | 1140 | |
| tgtttctt | ttttgtatt | gttaccta | taatattaag | accta | aaaaca tcgtgtt | 1200 | |
| gtttagttt | tggacactcc | tacctgt | gtat | agccaccgcg | agcgttagact | 1260 | |
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